

directory primer



Installing iManager 1.5 on NetWare, Windows and Linux

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Last month, we installed eDirectory 8.7 on NetWare, Windows, and Linux. In preparation for this column, I have set up a NetWare 6 server, a Windows 2000 Server, and a Red Hat 9 server with “all packages” installed. I’m just using the free Linux version of Red Hat, not their server version.

This month we’ll talk about the installation of iManager on NetWare, Windows and Linux. I’m going to make an assumption that most everyone is familiar with NetWare and doesn’t need me to outline the steps on how to install iManager on NetWare. The steps for installing iManager on NetWare work well and you can find this information at <http://www.novell.com/documentation>. Because of this, I will not be very explicit with steps for NetWare and Windows installations.

I will be much more explicit with the Linux installations, since I think that many people may be looking at cross-platform solutions for NetWare, Windows, and Linux—and because I myself am less familiar with Linux than I am with NetWare or Windows. Feel free to drop me an e-mail if you would like more information about a particular platform.

The NetWare Installation

The NetWare installation is easy. You extract the files to a folder on the root of SYS:, load the webapp.ncf file from the server console, which loads the Java GUI and the installation begins. After clicking next a few times, the installation is complete and from there you can bring up the iManager home page from your desktop in a matter of minutes.

The only problem I encountered was an error after I attempted to login to iManager. I installed Support Pack 3 for NetWare 6 and this resolved the error. I then accessed my server from the browser with the following URL:

http://IP_Address:2200/eMFrame/iManager.html

The Windows Installation

The Windows installation of iManager 1.5 was even less eventful. After extracting the files to a folder on to your hard drive, you run the eDirWebAppsInstall.exe file and the installation program begins. It installed Apache and Tomcat for me.

Basically, all I had to do was be there to click Next and Finish. I rebooted the machine after the installation and iManager was ready to go. I accessed my server from the following URL:

http://IP_Address/eMFrame/iManager.html

The Linux Installation

My Linux installation was a little more eventful than the NetWare and Windows installations. First of all, the Linux iManager 1.5 installation program does not install Apache and Tomcat for you as it does for NetWare and Windows. So I first had to install Tomcat, and the Sun JRE (Apache installs with the Linux installation if selected).

First, I went to Tomcat’s Web site at <http://jakarta.apache.org/>. I clicked on the link for the Binaries, then scrolled down to the bottom of the page and clicked the link for Tomcat 3.3.1a, which the documentation said iManager on Linux needs to run. You could try it with a later version of Tomcat if you want to. I downloaded the tar.gz version. The filename is jakarta-tomcat-3.3.1a.tar.gz. After downloading the file, I extracted the files to my home directory.

I knew I also needed a JVM (Java Virtual Machine), so I downloaded Sun’s JVM from their Web site. I downloaded an RPM (RedHat Package Manager) and installed the JVM RPM using the RPM command. I then edited the /etc/profile file using the vi text editor (because I was taught that real men use vi) and added the path of my JVM into the PATH statement. Here is what my path statement looks like:

```
PATH=$PATH:/usr/java/j2sdk1.4.1_04/bin:export PATH
```

Because Tomcat is a .tar file, all of the files necessary to run Tomcat are present, which is different from an RPM. Tomcat is not an actual installation—you just download the .tar file, extract the files and directories and start it. At startup, Tomcat asks for the path to your JVM from your PATH statement. There are other ways to denote the PATH statement, but this is the way I chose and it worked.

With Tomcat installed, you are ready to install iManager 1.5. I downloaded 1.5.1 for Linux. I extracted the files to a folder in my home directory and changed to the webapps/installs/unix directory, where the iMana-

gerInstall.bin file is located. To run the installation, type

```
./iManagerInstall.bin
```

at the console. The installation program is the same as it is on NetWare and Windows—but with one exception. The program did not detect my Tomcat installation, so I had to specify the path to the Tomcat webapps directory manually.

I did receive an error that gave me a problem for a while though. When I tried to login to iManager, I received an exception error from NDSAAuthenticator. After looking through a few TIDs, I determined that it might have something to do with jclient.jar not being in my classpath. I then looked in the README document for iManager.1.5.1 and at the bottom of the page was my exact error. I followed the instructions to load jclient.jar and iManager works perfectly. (The README document is in the iManager home directory.)

Below are more detailed steps and a few screenshots on how to install Tomcat, Sun's JRE, and iManager 1.5.1 on Linux.

1. After downloading Tomcat, open a terminal window.
2. Use the switch user command to login as root by typing

```
su -
```

at the prompt.
3. Change to the directory where the Tomcat binary is located.
4. Type

```
gunzip jakarta-tomcat-3.3.1a.tar.gz
```

to unzip the file.
5. Type

```
tar xvf jakarta-tomcat-3.3.1a.tar
```

to extract the contents of the .tar file.
6. Change to the bin directory.
7. Type

```
./startup.sh
```

to start Tomcat. Tomcat will not start unless you have previously installed the JVM.

8. To install the JVM, download an RPM package from Sun's website at <http://java.sun.com>.
9. Type

```
chmod +x
```

to give yourself the execute permission on the file.
10. Type

```
./j2sdk-1_4_1_04-linux-i586-rpm.bin
```

to extract the rpm package from the binary file.
11. Type *q* to quit the license and type *yes* to accept the license agreement.
12. Type

```
rpm -i j2sdk-1_4_1_04-fcs-linux-i586.rpm
```

to install the package.
13. After installing the package, type

```
vi /etc/profile
```

to edit the path statement and include your JVM installation in the path. Copy the Linux above into the file.
14. Exit the terminal session you are in and login as root again to set the new PATH statement.
15. With Tomcat and JVM installed and added to your path statement, you can start your web services.
16. Switch to your Tomcat installation directory and type

```
./startup.sh
```
17. Type

```
service httpd start
```

to start the Apache web server. If you receive a port conflict error message, stop eDirectory and start it after you start Apache. According to the iManager README file, you need to change the ports 80 and 443 to port numbers higher than 1024 because your Apache web server is using ports 80 and 443. You do this by changing the DefaultPort (DefaultClearTextPort and DefaultSSLPort) val-

ues through the ConsoleOne utility to port values above 1024, as I have done in Figure 1.

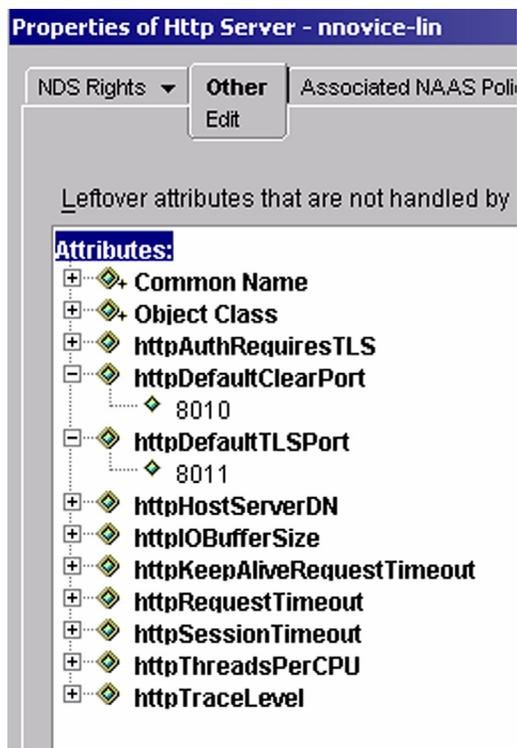


Figure 1: Properties of the http server object.

18. Type `nds` to start eDirectory if it isn't already started.
19. Access iManager from a browser by typing:

`http://IP_Address:8080/eMFrame/iManager.html`

20. If you receive an error message, use the vi text editor, open the `tomcat.sh` file and add the following line in the file (see Figure 2):

```
LD_LIBRARY_PATH=/usr/lib;export
LD_LIBRARY_PATH
```

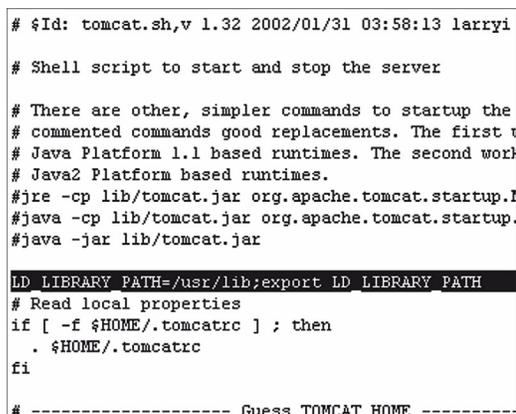


Figure 2: Edits for tomcat.sh file.

21. Restart your Web services and you should be ready to go.

Conclusion

Now that we have installed eDirectory and iManager on all three platforms, with an emphasis on Linux, we can administer the Directory. So next month, we'll talk about features of eDirectory and the administration of eDirectory through iManager. In the coming months, we'll talk about how to run other eDirectory tools, such as DSTRACE and so on.