

Install & Configure Apache with PHP, JSP and MySQL on Windows XP Pro

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This is a quick guide to install and configure the Apache web-server with PHP and JSP support on a Windows XP Pro machine. Let me know if this helps you out! Feedback is appreciated. This is my first “published” guide. I made it for my own reference. Why not share?

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Versions used:

Apache	2.0.39
PHP	4.2.1
Tomcat	4.0.4
j2sdk	1.4.0.01
MySQL	3.23.51
MyODBC	2.50.39
PHPMyAdmin	2.2.6

Change Log:

2002/08/01	Changed workers.properties file – the ajp14 stuff was removed
	Modified php.ini. Changed the following: include_path = ".;c:\php\includes" session.save_path = C:\Temp session.cookie_path = \
2002/07/31	Modified workers.properties file – some paths were for older versions of Tomcat
2002/07/26	Modified step 5 of JSP install - hardcoded the Tomcat configuration into the Apache httpd.conf file. Also added MySQL installation instructions.

Download the Components

Before you can begin, you must first download all the required components. The components used in this tutorial are listed below. You may want to download the latest versions. The versions used in the tutorial are listed.

Apache Web Server

- <http://httpd.apache.org/>
- <http://httpd.apache.org/dist/httpd/binaries/win32/>
- [apache_2.0.39-win32-x86-no_ssl.msi](#)

PHP

- PHP Win32 Binaries
 - <http://www.php.net/>
 - <http://www.php.net/downloads.php>
 - [php-4.2.1-Win32.zip](#)
- PHP > Apache connector
 - <http://FReemIRC.com/miki/php4apache2.dll>
 - or <http://Rafigh.com/miki/php4apache2.dll>
 - or <http://IRan4You.com/miki/php4apache2.dll>
 - [php4apache2.dll](#)

JSP

- Tomcat (<http://jakarta.apache.org/site/binindex.html>)
 - [jakarta-tomcat-4.0.4.exe](#)
- mod_jk
 - http://www.acg-gmbh.de/mod_jk/
 - [mod_jk.dll](#)
- Java
 - Download the latest Java SDK (We used Java 2 Standard Edition - J2SE)
 - <http://java.sun.com/>
 - <http://java.sun.com/j2se/1.4/download.html> (get the SDK, not JRE)
 - [j2sdk-1_4_0_01-windows-i586.exe](#)

MySQL

- MySQL Database
 - <http://www.mysql.com/downloads/mysql.html>
 - Download the latest stable release for Windows
 - [mysql-3.23.51-win.zip](#)
- MyODBC
 - <http://www.mysql.com/downloads/>
 - Download the latest stable release of MyODBC for WinXP
 - [myodbc-2.50.39-nt.zip](#)
- PHPMyAdmin
 - <http://www.phpmyadmin.net/>
 - Download the latest stable release of PHPMyAdmin (.php files)
 - [phpMyAdmin-2.2.6-php.zip](#)

Install Components

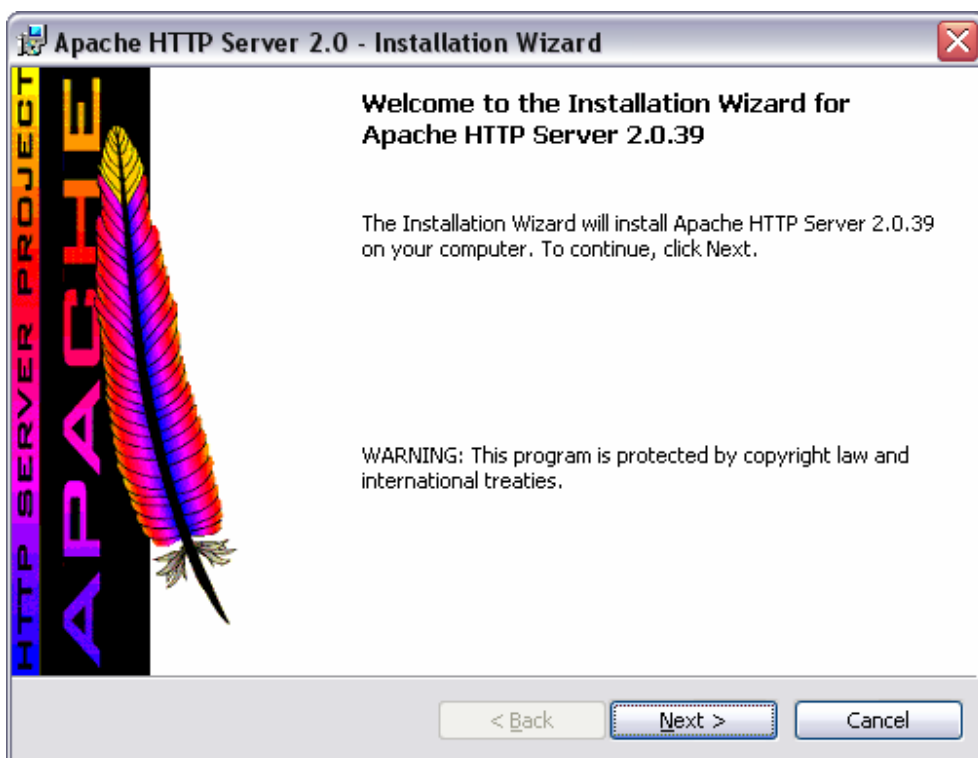
Now that you have the necessary files, you can begin the installation process. We will install Apache, PHP, then the Java SDK and Tomcat.

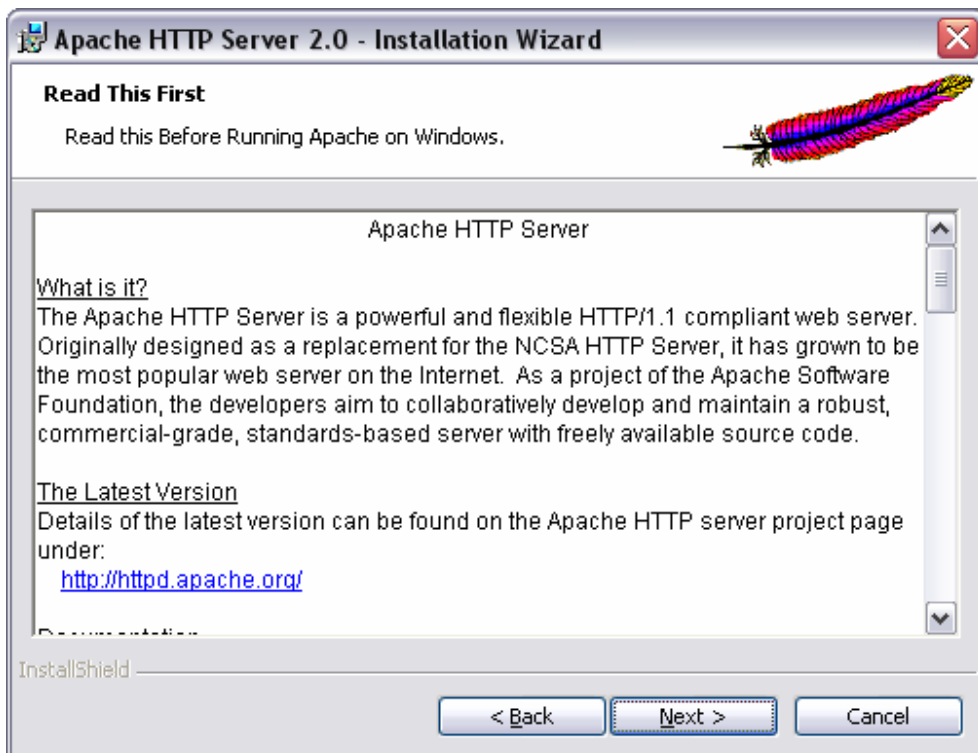
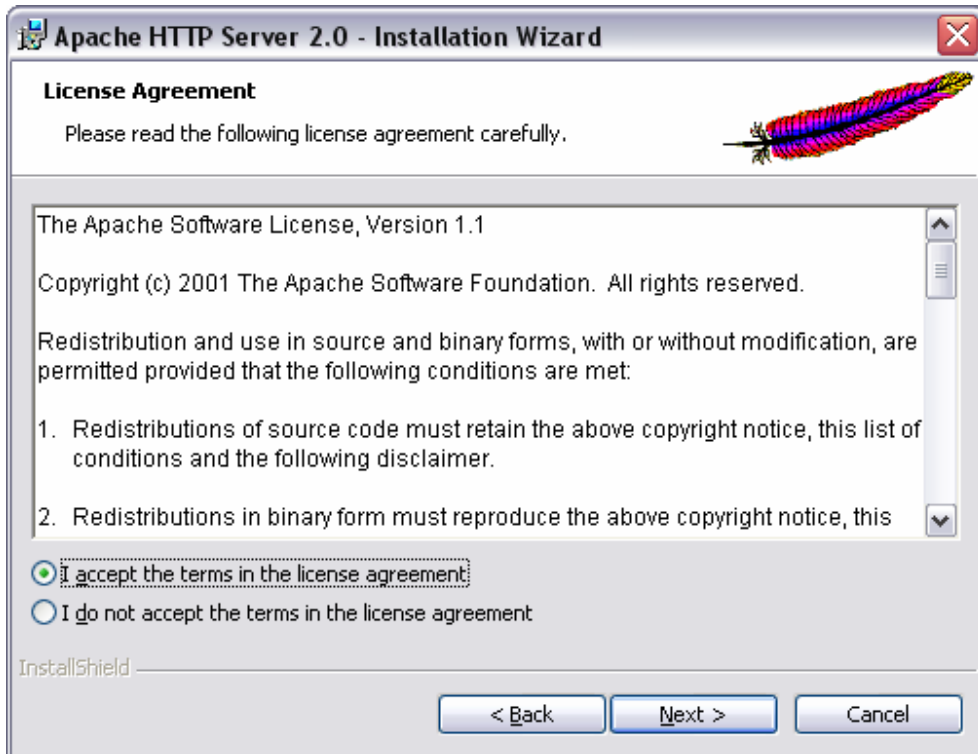
Note to Windows2000 users:

This guide should work with Windows2000 as well. Remember to replace C:\WINDOWS with C:\WINNT anywhere in this document.

Apache

1. Run [apache_2.0.39-win32-x86-no_ssl.msi](#)





2. Choose "Run as a service for All Users – Recommended" when prompted.

Apache HTTP Server 2.0 - Installation Wizard

Server Information

Please enter your server's information.

Network Domain (e.g. somenet.com)

Server Name (e.g. www.somenet.com):

Administrator's Email Address (e.g. webmaster@somenet.com):

Install Apache HTTP Server 2.0 programs and shortcuts for:

for All Users, on Port 80, as a Service -- Recommended.

only for the Current User, on Port 8080, when started Manually.

InstallShield

< Back Next > Cancel

Apache HTTP Server 2.0 - Installation Wizard

Setup Type

Choose the setup type that best suits your needs.

Please select a setup type.

Typical

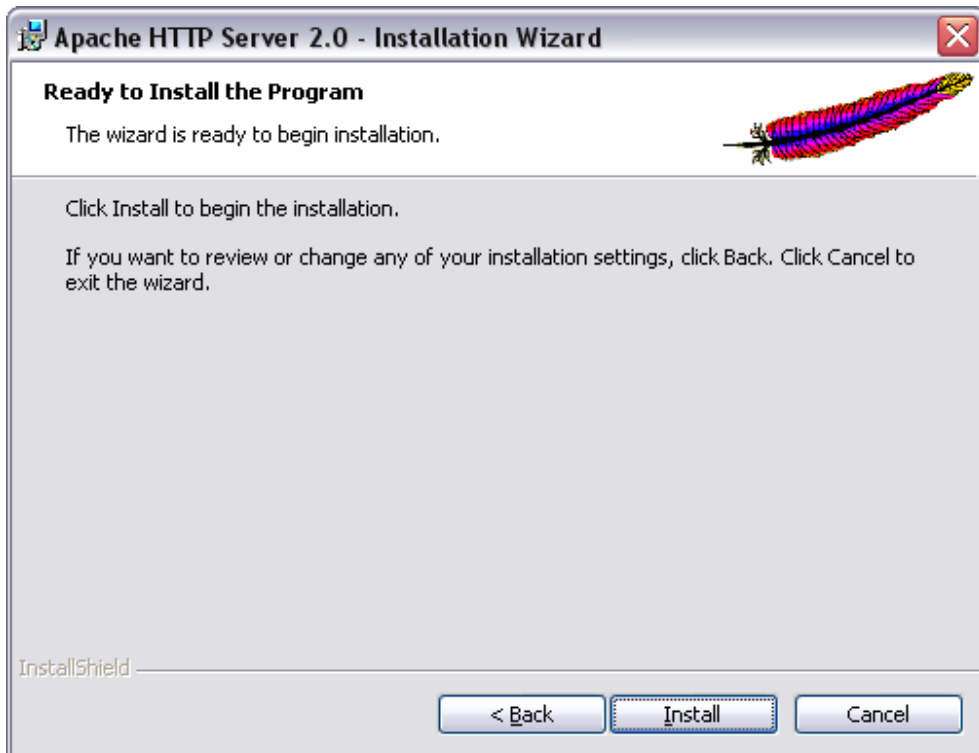
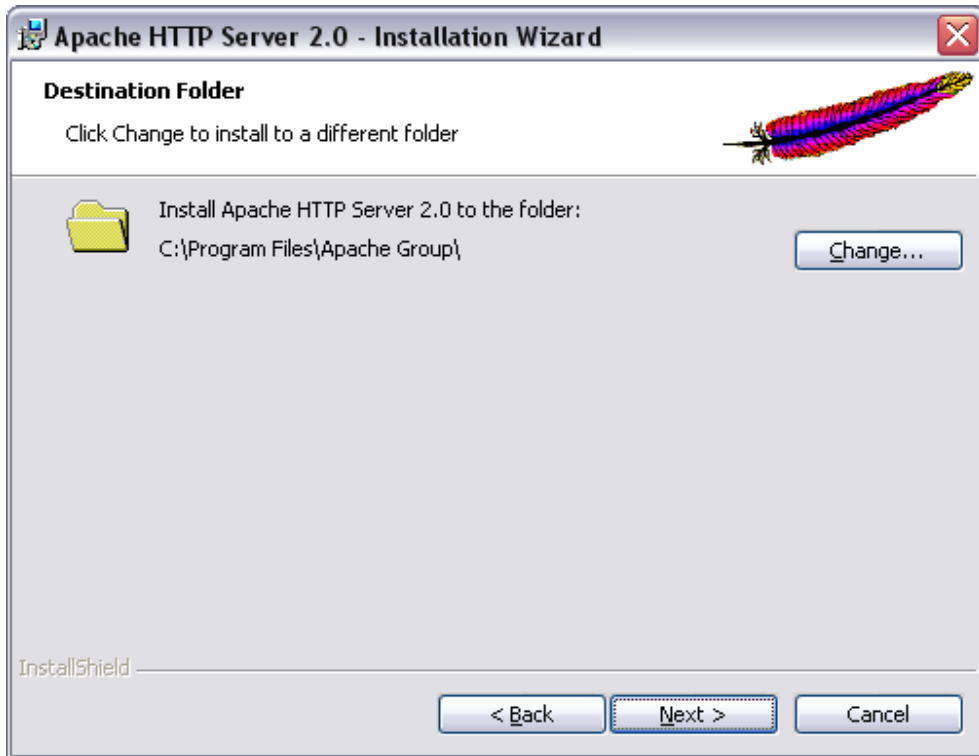
Typical program features will be installed. (Headers and Libraries for compiling modules will not be installed.)

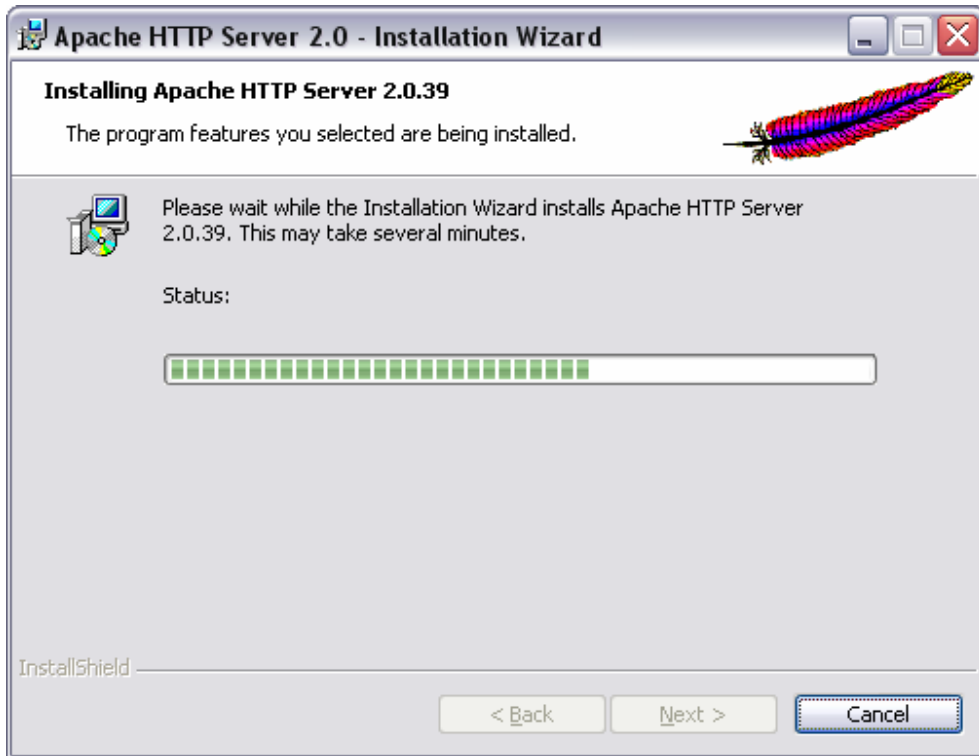
Custom

Choose which program features you want installed and where they will be installed. Recommended for advanced users.

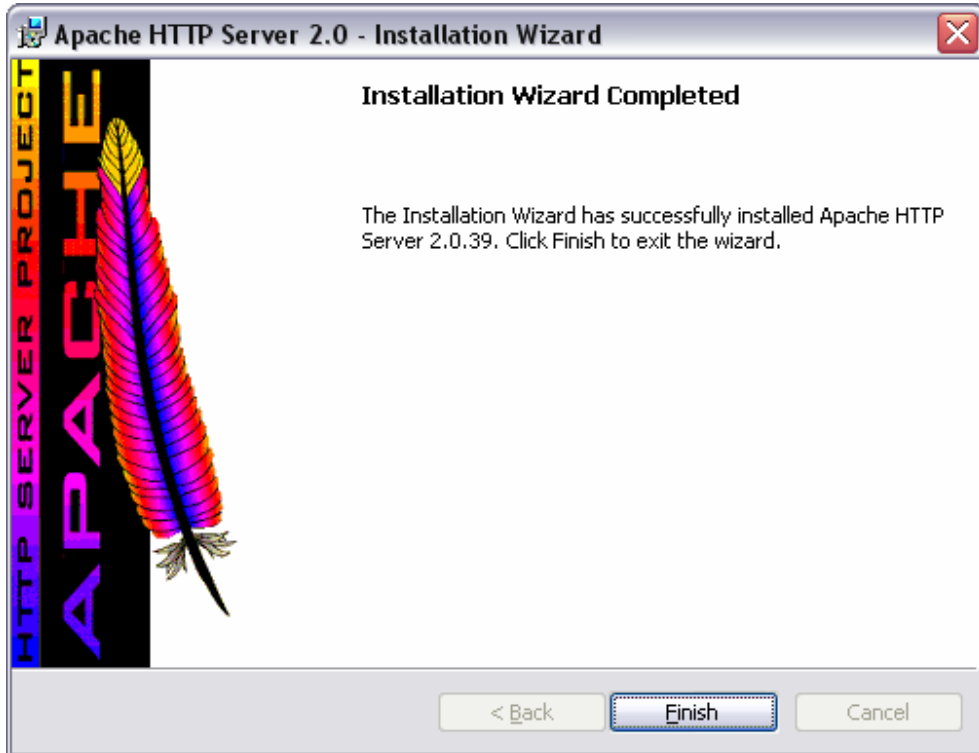
InstallShield

< Back Next > Cancel

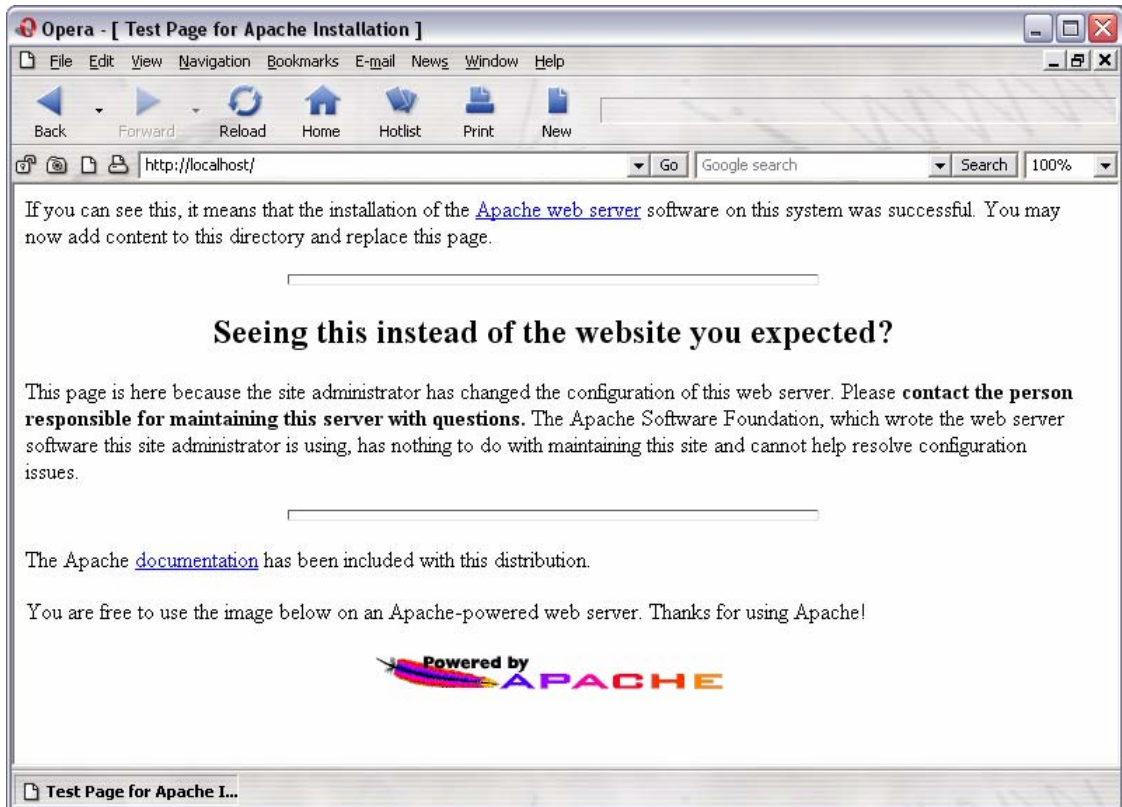




3. Finish the installation program.



4. **Test:** Open <http://localhost> in a web browser.



PHP

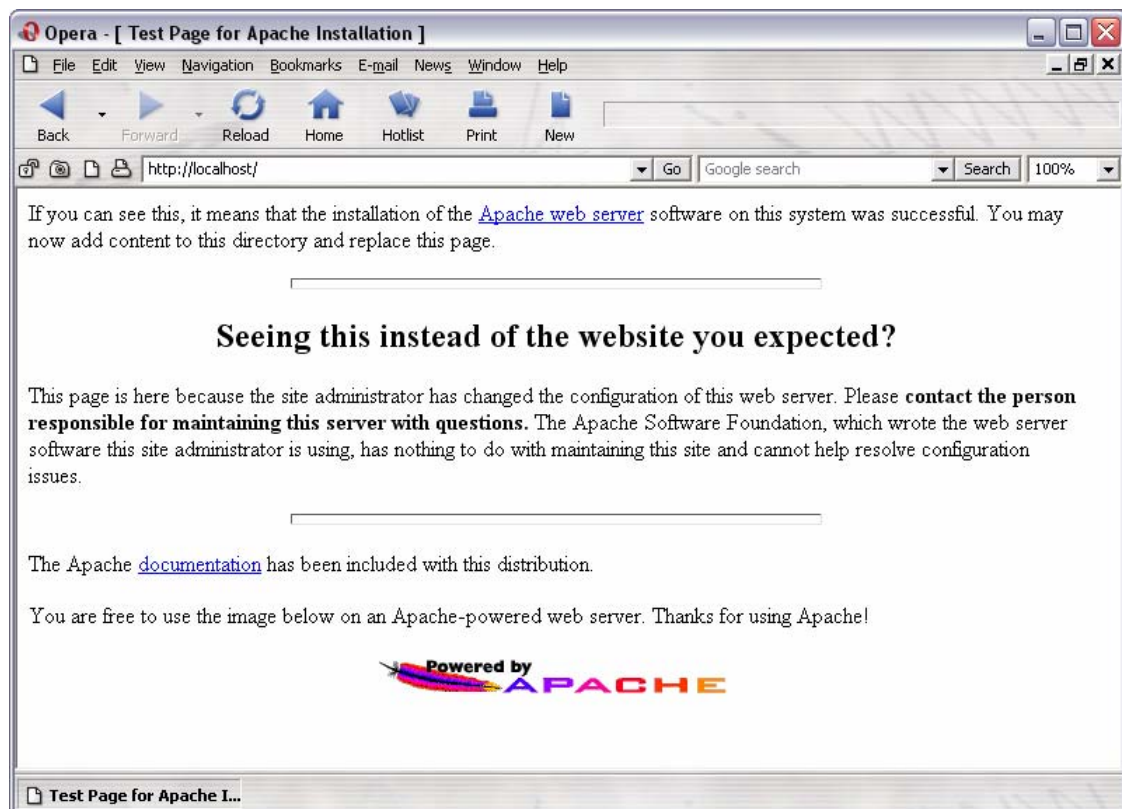
1. Extract **php-4.2.1-Win32.zip** into C:\php
2. Replace c:\php\sapi\php4apache2.dll with the one you downloaded.
3. Copy and rename c:\php\php.ini-dist to C:\WINDOWS\php.ini
4. Open php.ini and change the following:

```
include_path = ".;c:\php\includes"  
session.save_path = C:\Temp  
session.cookie_path = \
```

5. Add C:\php to your PATH System Environment Variable.
6. Add the following lines to *httpd.conf*:

```
LoadModule php4_module c:\php\sapi\php4apache2.dll  
AddType application/x-httpd-php .php .php3 .phtml
```

7. **Test:** Restart Apache & open <http://localhost> in a web browser. Hopefully you see the same thing as before:

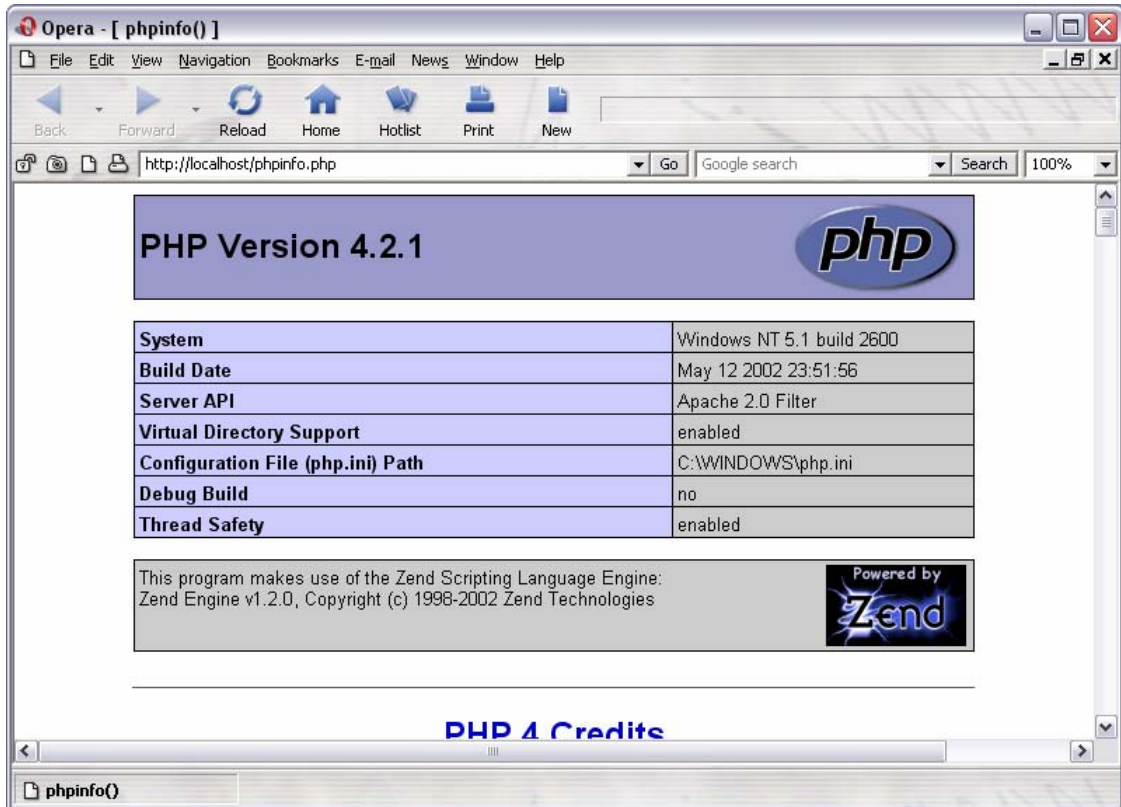


8. **Test:** Create a new document called *phpinfo.php* and paste the following into it:

phpinfo.php

```
<?php  
phpinfo();  
?>
```

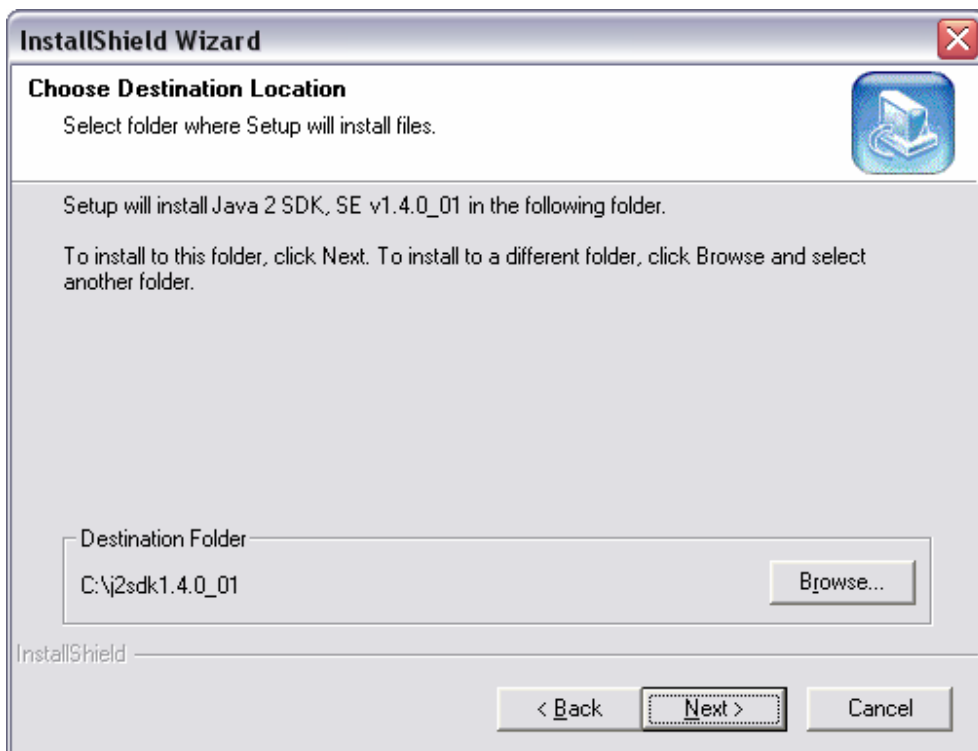
Save the document under C:\Program Files\Apache Group\Apache2\htdocs. Now open <http://localhost/phpinfo.php> in a web browser. You should see something like the following:

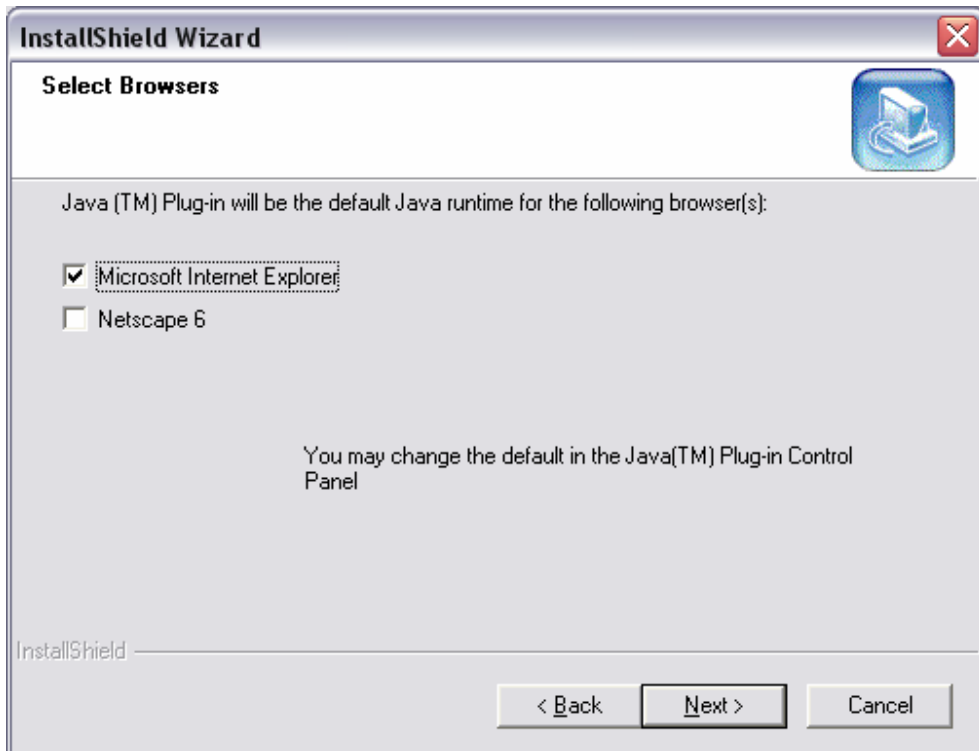
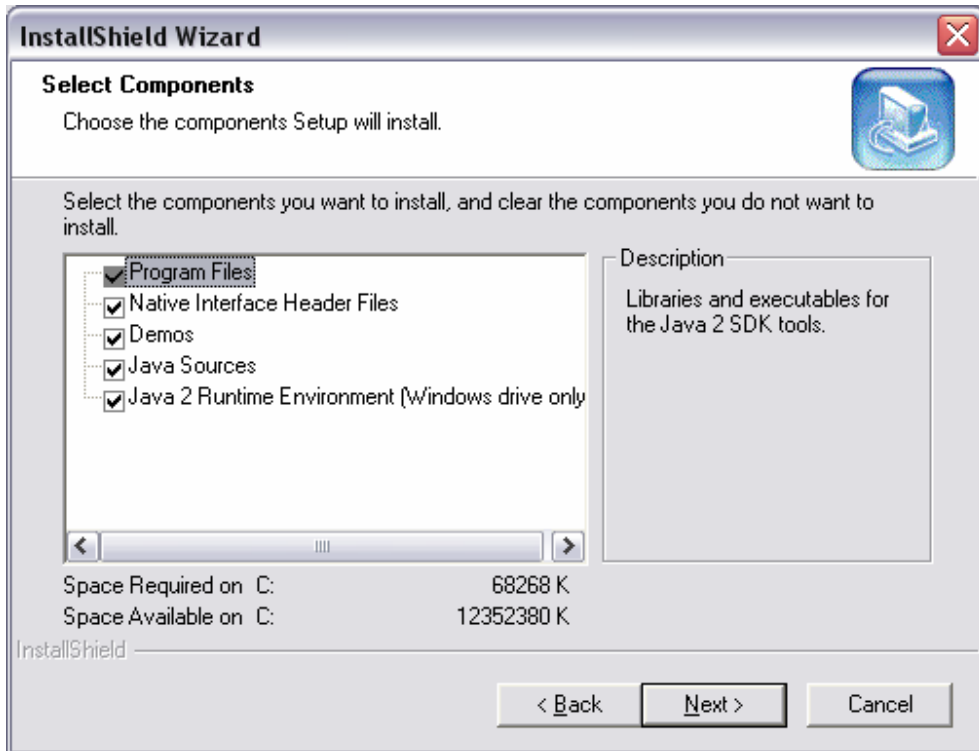


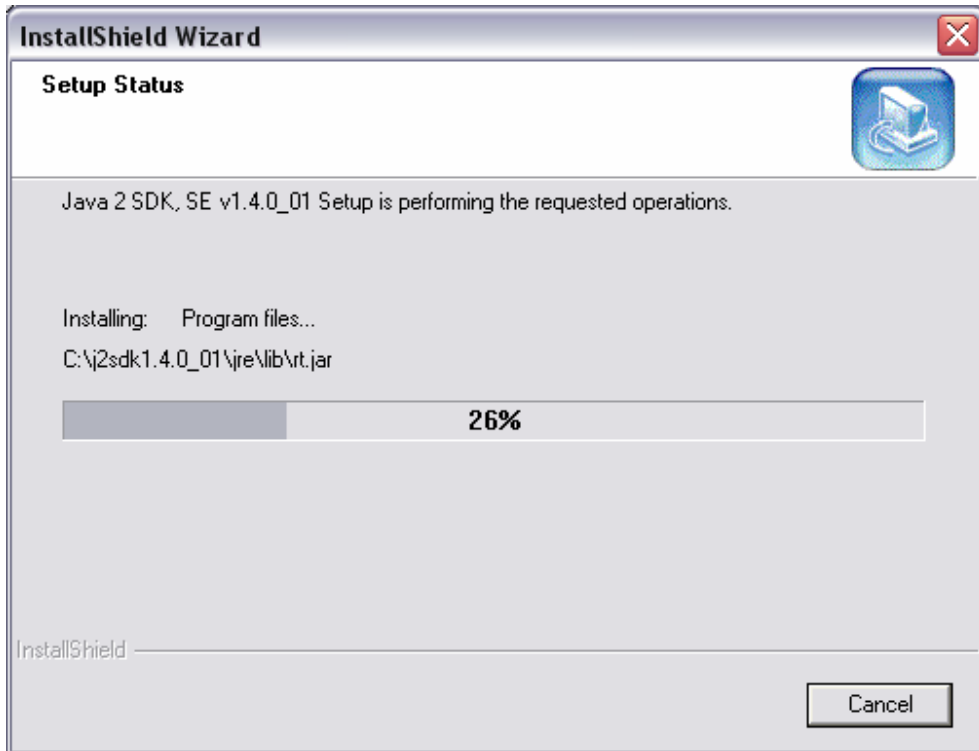
JSP

1. Run `j2sdk-1_4_0_01-windows-i586.exe`



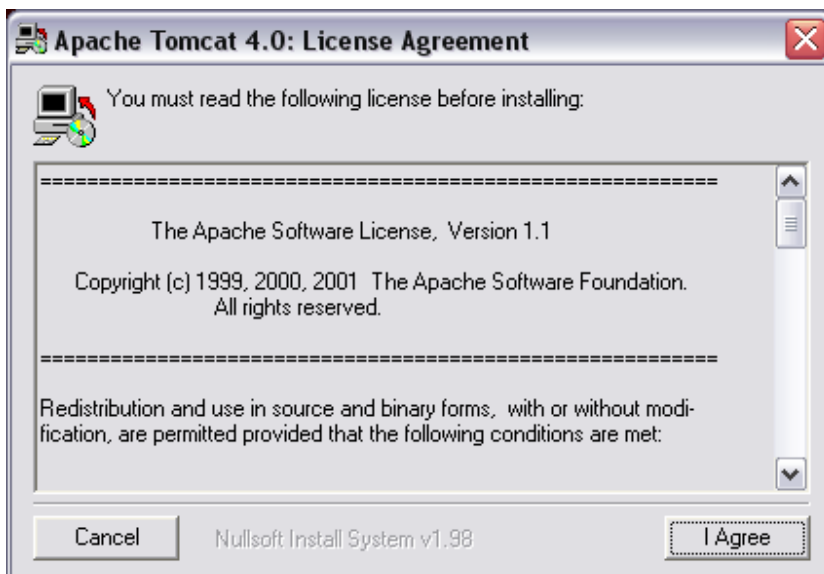




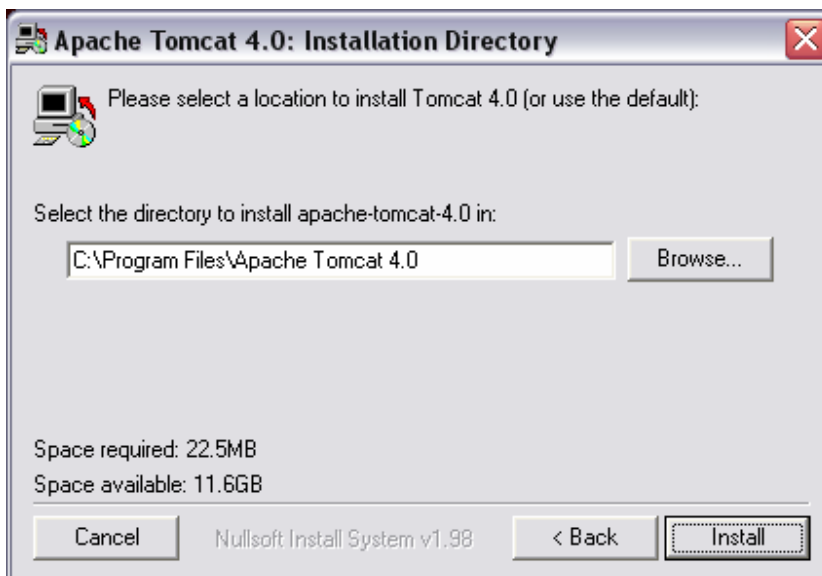
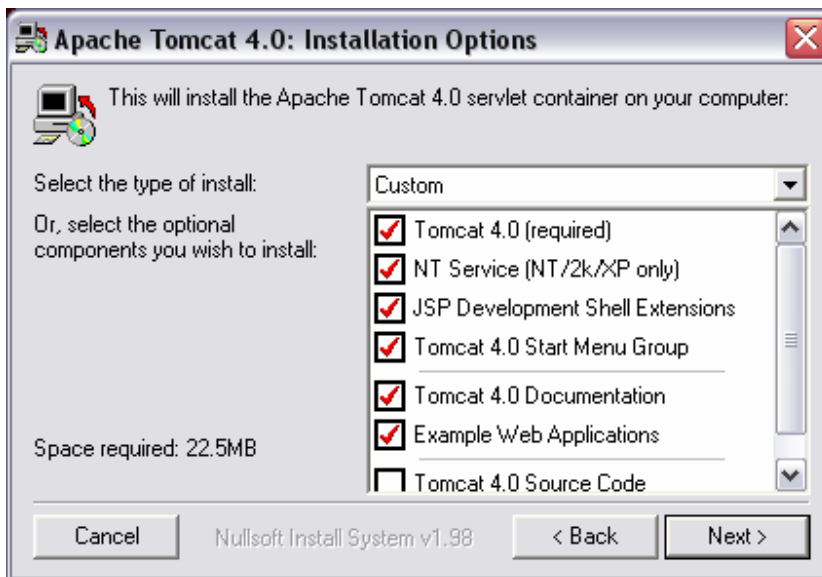


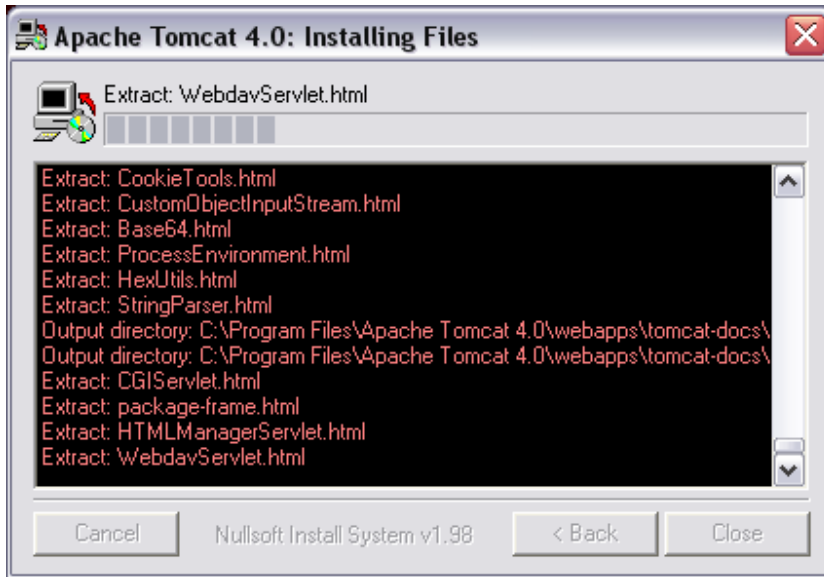


2. Run [jakarta-tomcat-4.0.4.exe](#)



3. Choose "NT Service (NT/2k/XP only) on the Installation Options screen.





4. Copy **mod_jk.dll** to C:\WINDOWS\system32
5. Add the following at the end of your Apache *httpd.conf* file:

```
#####
## JSP Support
## Copied from Tomcat auto-configuration file
##   + added JkMount /*.jsp ajp13
##   + removed Virtual Host

<IfModule !mod_jk.c>
  LoadModule jk_module c:/WINDOWS/system32/mod_jk.dll
</IfModule>

JkWorkersFile "C:/Program Files/Apache Tomcat 4.0/conf/workers.properties"
JkLogFile "C:/Program Files/Apache Tomcat 4.0/logs/mod_jk.log"

JkLogLevel info

JkMount /manager ajp13
JkMount /manager/* ajp13

JkMount /examples ajp13
JkMount /examples/* ajp13

JkMount /tomcat-docs ajp13
JkMount /tomcat-docs/* ajp13

JkMount /webdav ajp13
JkMount /webdav/* ajp13

JkMount /*.jsp ajp13
```

6. Create a new text document called *workers.properties*. Save this document in the following directory: C:\Program Files\Apache Tomcat 4.0\conf. Cut and paste this into the document:

workers.properties

```
workers.tomcat_home=C:/Program Files/Apache Tomcat 4.0
workers.java_home=C:/j2sdk1.4.0_01
ps=\

worker.list=ajp13, ajp14
worker.ajp13.port=8009
worker.ajp13.host=localhost
worker.ajp13.type=ajp13
worker.ajp13.lbfactor=1

worker.loadbalancer.type=lb
worker.loadbalancer.balanced_workers=ajp13
worker.inprocess.type=jni
worker.inprocess.class_path=$(workers.tomcat_home)$(ps)server$(ps)lib$(ps)catalina.jar
worker.inprocess.cmd_line=start
worker.inprocess.jvm_lib=$(workers.java_home)$(ps)jre$(ps)bin$(ps)server$(ps)jvm.dll
worker.inprocess.stdout=$(workers.tomcat_home)$(ps)logs$(ps)inprocess.stdout
worker.inprocess.stderr=$(workers.tomcat_home)$(ps)logs$(ps)inprocess.stderr
```

7. Add the following to C:\Program Files\Apache Tomcat 4.0\conf\server.xml after the <Server port="8005" ...> declaration.

```
<Listener className="org.apache.ajp.tomcat4.config.ApacheConfig"
  modJk="c:/WINDOWS/system32/mod_jk.dll" jkDebug="info"
  workersConfig="C:/Program Files/Apache Tomcat 4.0/conf/workers.properties"
  jkLog="C:/Program Files/Apache Tomcat 4.0/logs/mod_jk.log"/>
```

8. Add the following lines after the <Service name="Tomcat-Standalone"> declaration in the server.xml document.

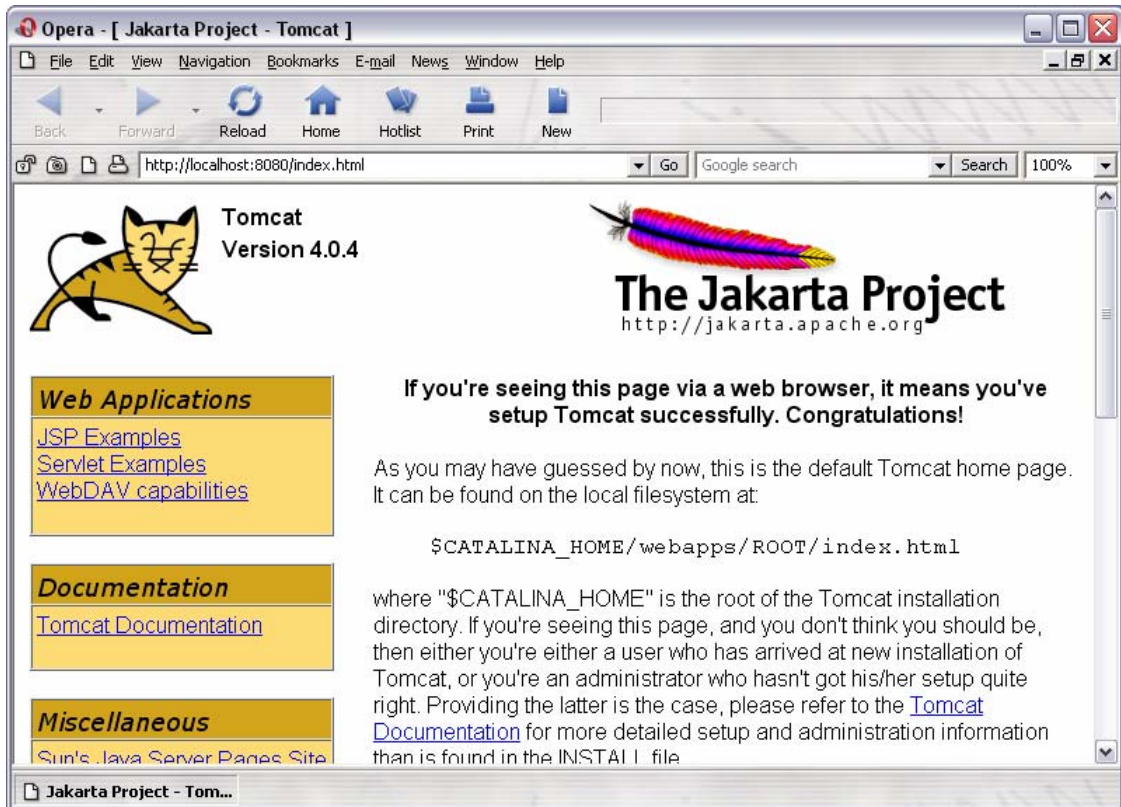
```
<!-- Define an AJP 1.3 Connector on port 8009 -->
  <Connector className="org.apache.ajp.tomcat4.Ajp13Connector"
    port="8009" minProcessors="5" maxProcessors="75"
    acceptCount="10" debug="0"/>
```

9. Finally in the server.xml document, after any <Host name="localhost" ...> declarations, add a listener:

```
<Listener className="org.apache.ajp.tomcat4.config.ApacheConfig"
  append="true" />
```

10. **Note:** Always start Tomcat first and then start Apache. If you have to bounce Tomcat, remember to take down Apache first and restart it after Tomcat restarts.

Test: Start the Tomcat service. Open <http://localhost:8080/> in a web browser. You should see something like the following:

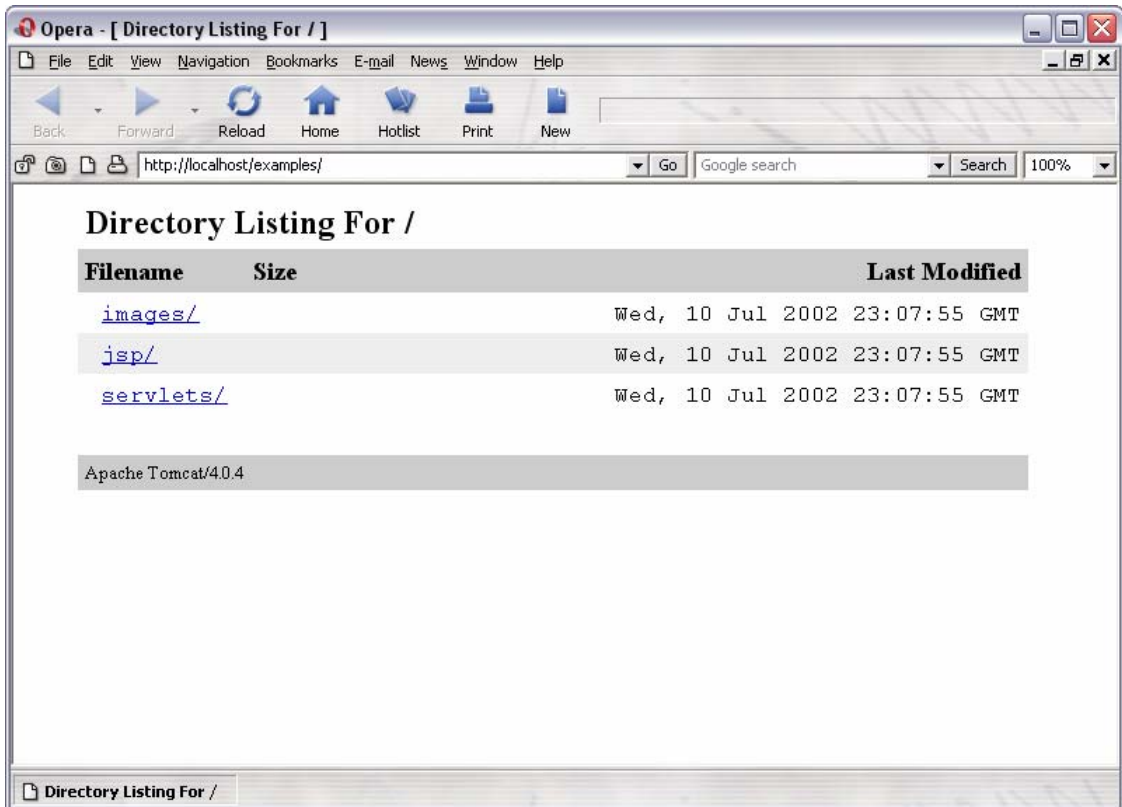


Test out the JSP Examples as well as the Servlet Examples to make sure they work. If they do not work, something is wrong with your Tomcat installation. (It's much easier to stop the Tomcat service, uninstall it, and start over again. Troubleshooting this is not fun as there's little documentation available.)

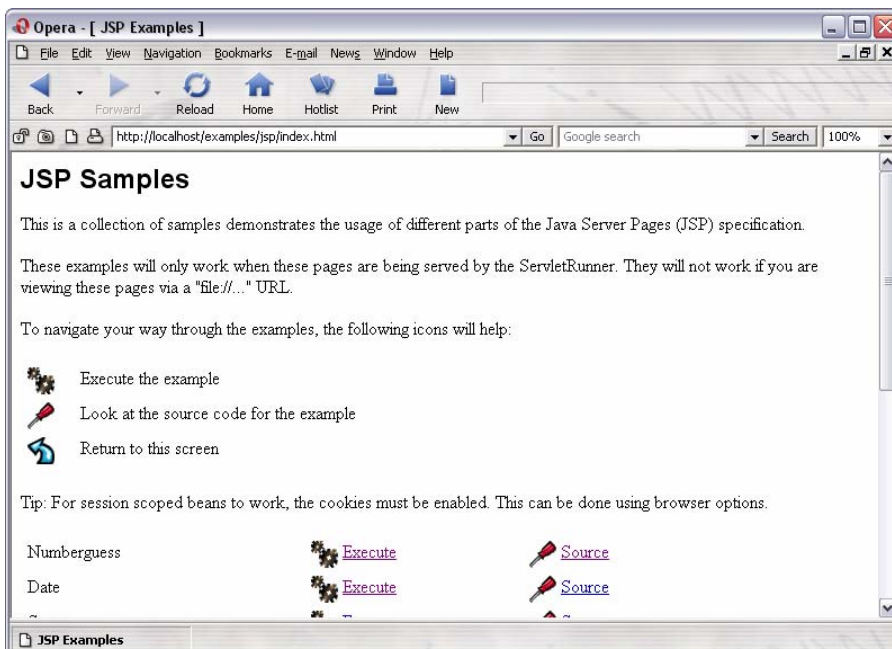
Test: Start up the Apache2 service and open <http://localhost/> in a web browser. Still working?

Test: Now try <http://localhost/phpinfo.php> to make sure that's still in working order.

Test: Open <http://localhost/examples/> in a browser, you should see something like the following:

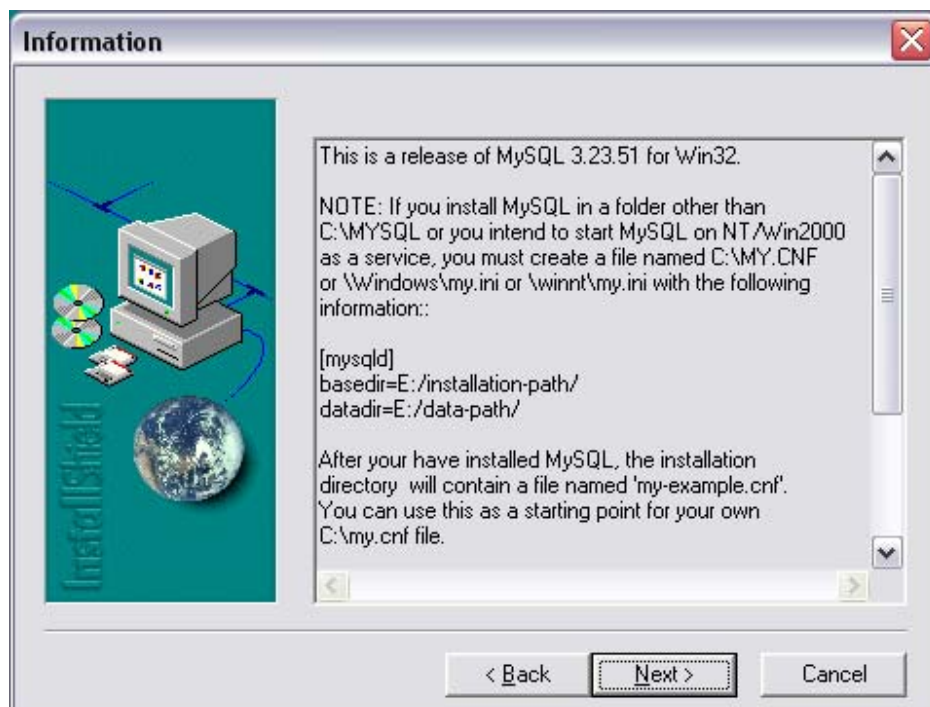


Follow the [jsp/](#) link. You should recognize the page from before.

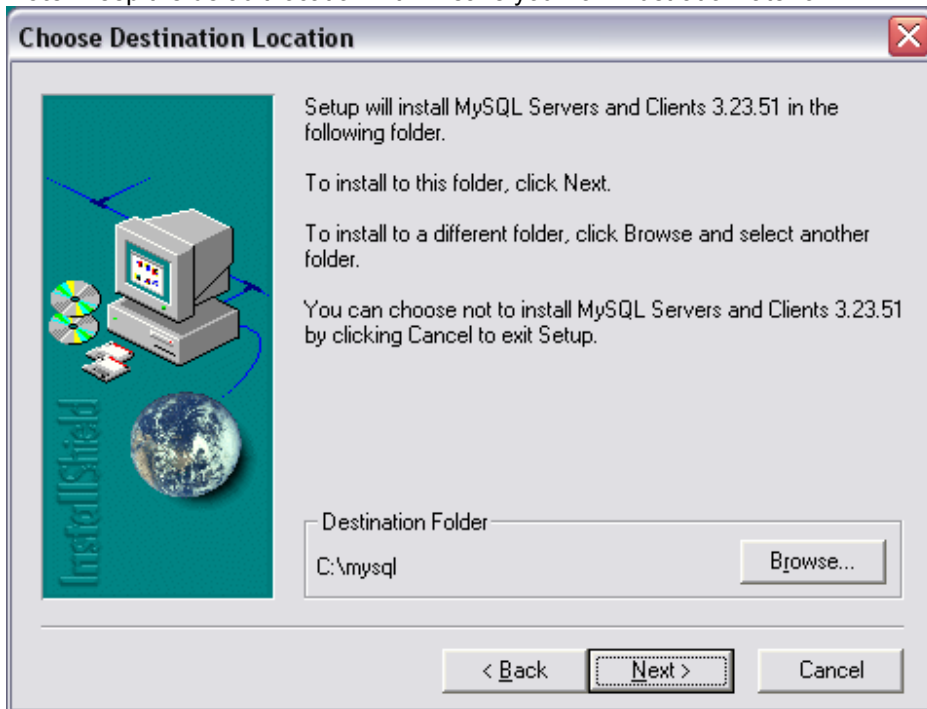


MySQL

1. Extract [mysql-3.23.51-win.zip](#) to a temporary directory and run Setup.exe.



Note: Keep the default location. It will save you from frustration later on.





You may delete the temporary setup files at this time.

2. Open a command prompt and run the following command to install mysql as a Windows Service:

```
C:\mysql\bin> mysqld-max-nt -install
```

Note: It is advisable to close the Services utility while performing the --install or --remove operations, this prevents some odd errors.

```
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\mysql\bin>mysqld-max-nt --install
Service successfully installed.

C:\mysql\bin>
```

3. **Test:** At the command prompt, type in `NET START MySQL` . This should start up the service you just setup.



```
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

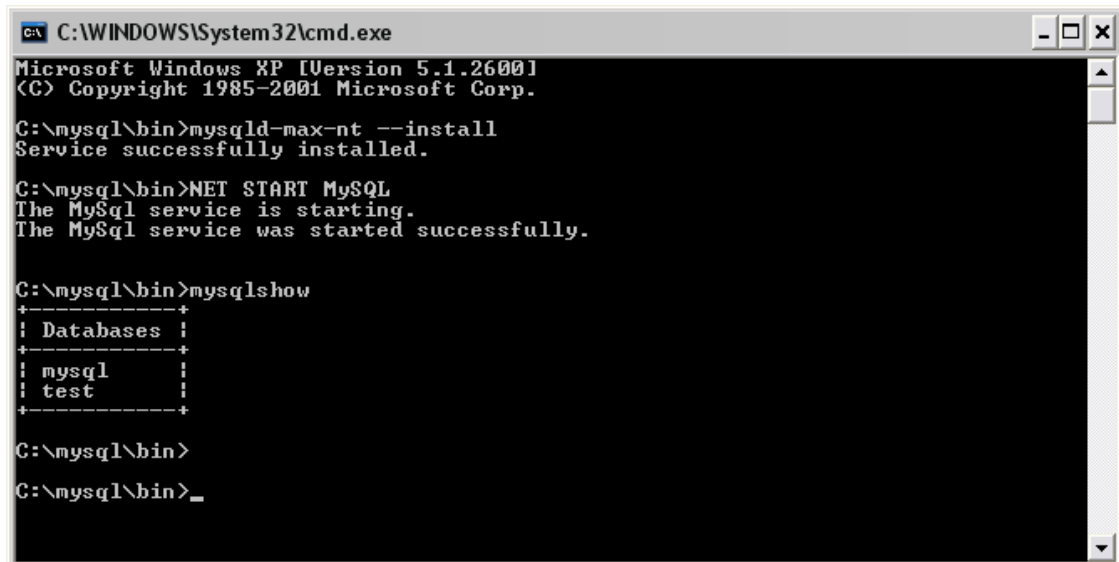
C:\mysql\bin>mysqld-max-nt --install
Service successfully installed.

C:\mysql\bin>NET START MySQL
The MySQL service is starting.
The MySQL service was started successfully.

C:\mysql\bin>_
```

Note: If you decided to install mysql somewhere besides the default `c:\mysql`, you may run into problems running it as a service. Check the `mysql.err` log file. It should tell you what's going on. It most likely has something to do with the `my.cfg` or `my.ini` files.

4. **Test:** Type in the command `mysqlshow` . It should display the current databases.



```
C:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

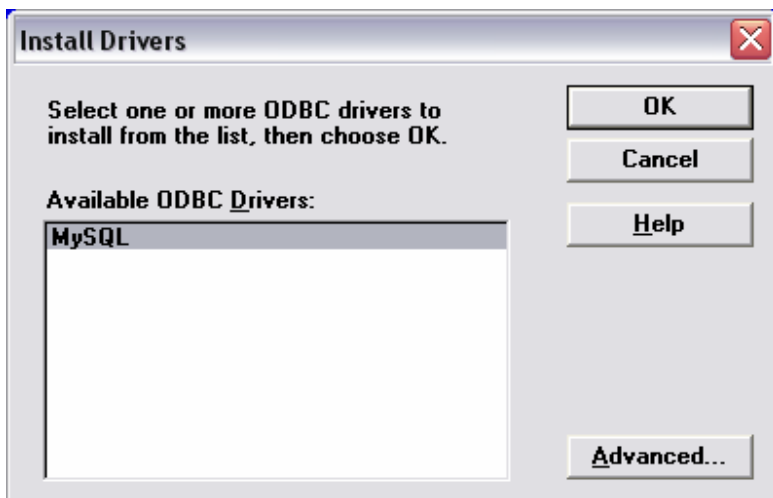
C:\mysql\bin>mysqld-max-nt --install
Service successfully installed.

C:\mysql\bin>NET START MySQL
The MySQL service is starting.
The MySQL service was started successfully.

C:\mysql\bin>mysqlshow
+-----+
| Databases |
+-----+
| mysql    |
| test     |
+-----+

C:\mysql\bin>
C:\mysql\bin>_
```

5. Extract `myodbc-2.50.39-nt.zip` to a temporary directory and run `SETUP.EXE`. (Don't worry if the Installer looks like it's for Windows 3.1. It's normal.)



At this point, just click Close.





Note: You may delete the temporary installation directory at this time.

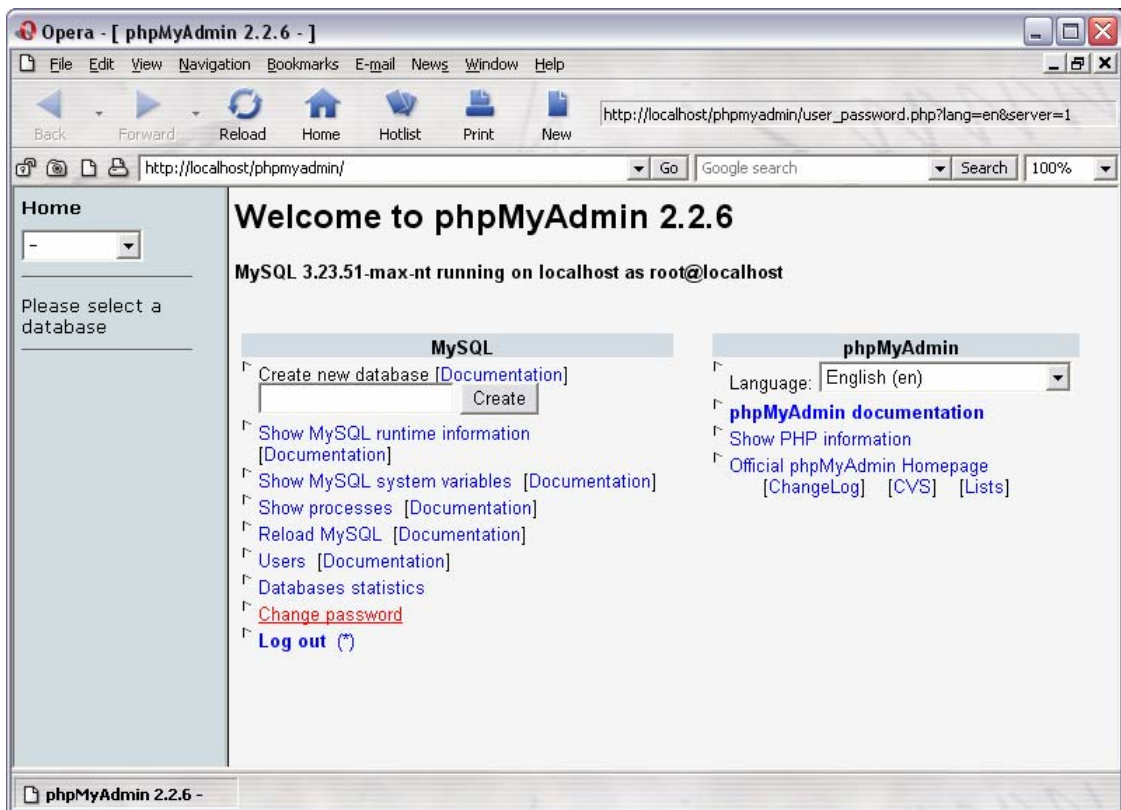
6. Extract [phpMyAdmin-2.2.6-php.zip](#) to your *htdocs* directory and rename it to something like "phpmyadmin" (e.g. C:\Program Files\Apache Group\Apache2\htdocs\phpmyadmin).

Note: You may want to use a *.htaccess* file or use the following to prevent random people from accessing PHPMyAdmin.

7. Open the *config.inc.php* in your favorite text editor and modify the following variables:

```
$cfgPmaAbsoluteUri = 'http://localhost/phpmyadmin/';  
$cfgServers[$i]['auth_type'] = 'http';
```

8. Open <http://localhost/> and login using root (password is blank). Make sure to change your password.



Resources

Apache

<http://www.apache.org/>

PHP

<http://www.php.net/>

Perl

<http://www.perl.com/>

<http://www.activestate.com/>

JSP

http://www.acg-gmbh.de/mod_jk/

<http://www.galatea.com/flashguides/apache-tomcat-24-win32.xml>

<http://www.jguru.com/faq/view.jsp?EID=853905>

MySQL

<http://www.mysql.com/>

<http://www.phpmyadmin.net/>

Thanks!

Special thanks to Andrew Conrad, Rick Reumann, Dallas Thunder, and Andrei Isakov for their helpful feedback.