

# Introduzione a XAMPP

# Introduzione

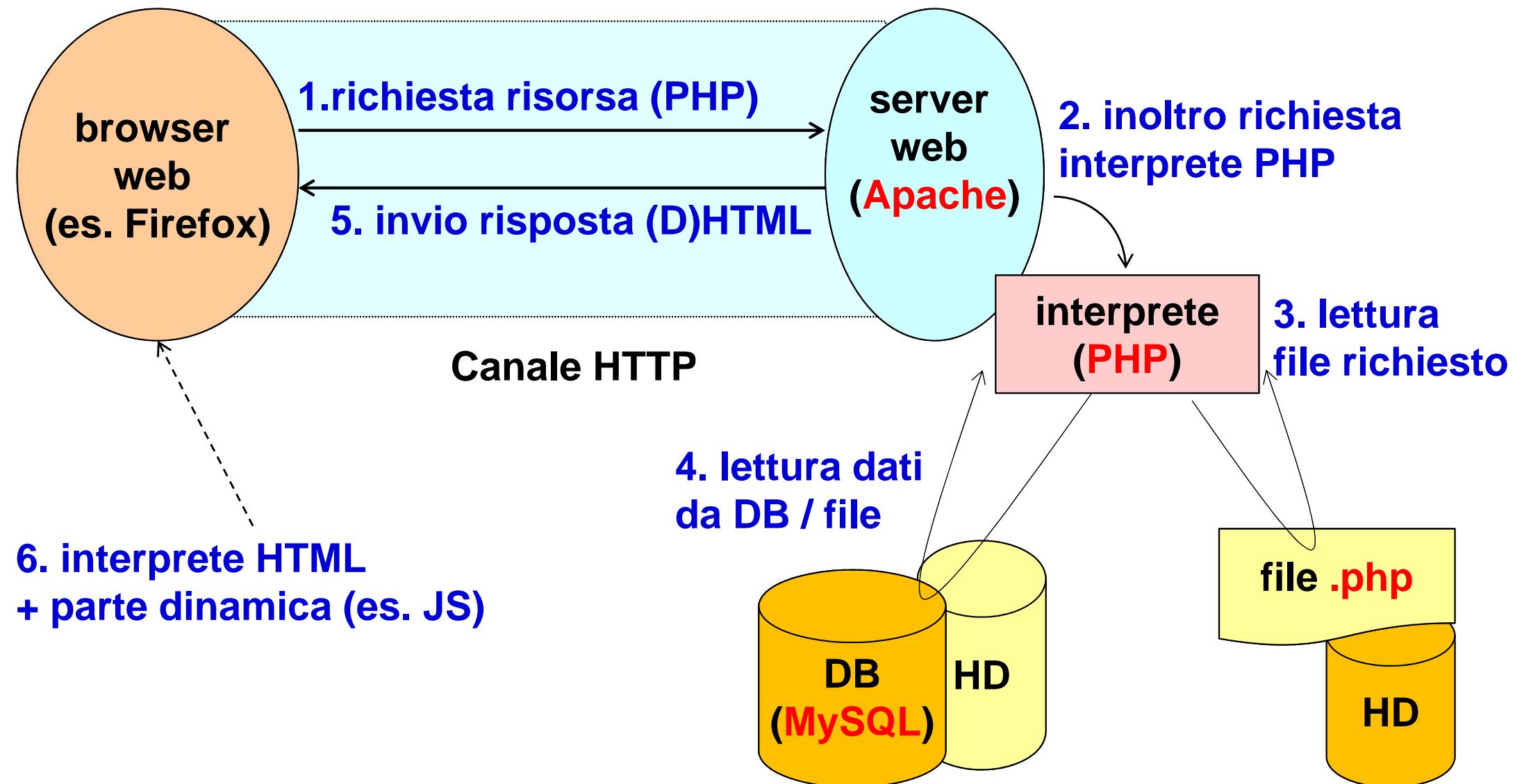
- **applicazione web richiede**
  - diversi componenti
    - HTTP server per rendere disponibili le pagine web
      - es. Apache
    - database per gestire i dati
      - es. MySQL
    - application engine per l'esecuzione di programmi
      - es. interprete PHP

# Introduzione

## ■ XAMPP: insieme integrato di pacchetti software

- include: Apache, PHP, MySQL, phpMyAdmin, ...
- orientato allo sviluppo/test di applicazioni web
- facile da installare, configurazione predefinita
- interfaccia per operazioni semplici (XAMPP control panel)
  - es. avvio/stop servizi, configurazione porte web server
- in generale non adatto per sistemi di produzione
  - hardening (con riferimento alla sicurezza)

# Il web dinamico e XAMPP



# XAMPP

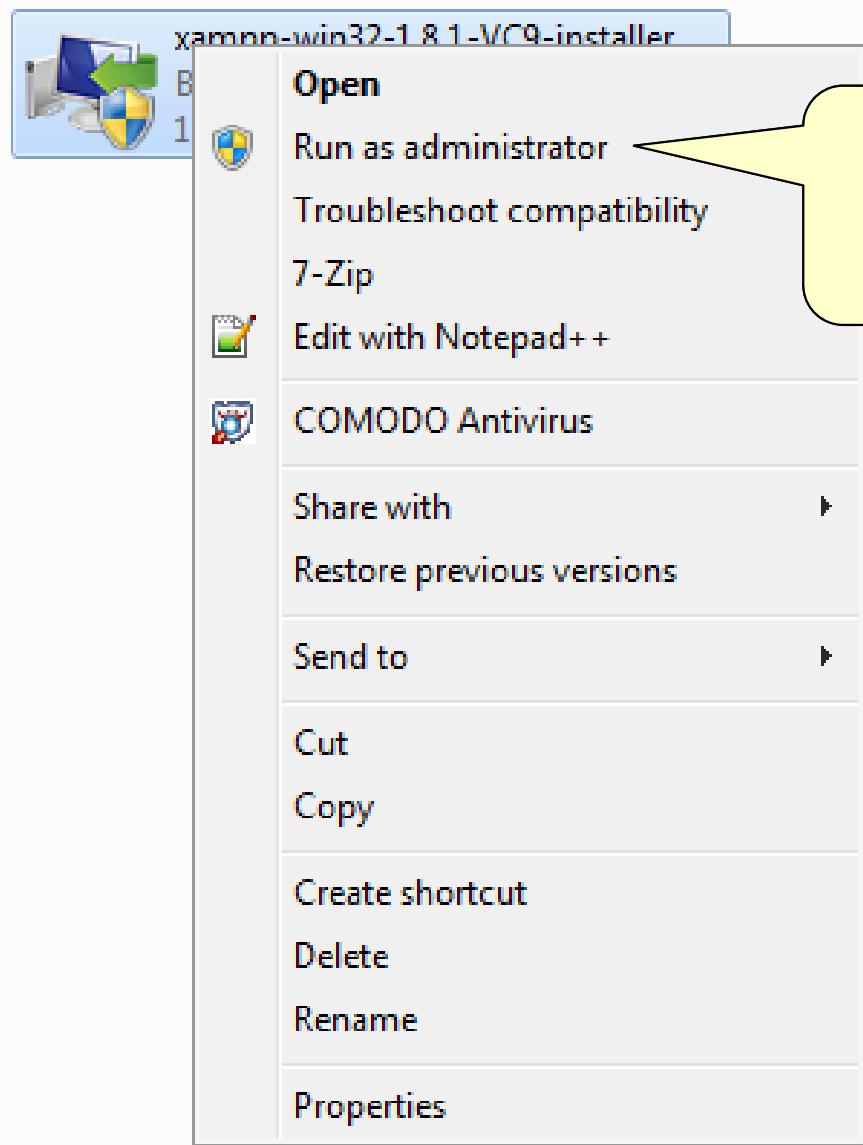
- **pagina di download**

- <http://www.apachefriends.org>
    - XP e 2003 non piu supportati (ultima versione 1.8.3)

- **disponibile anche per**

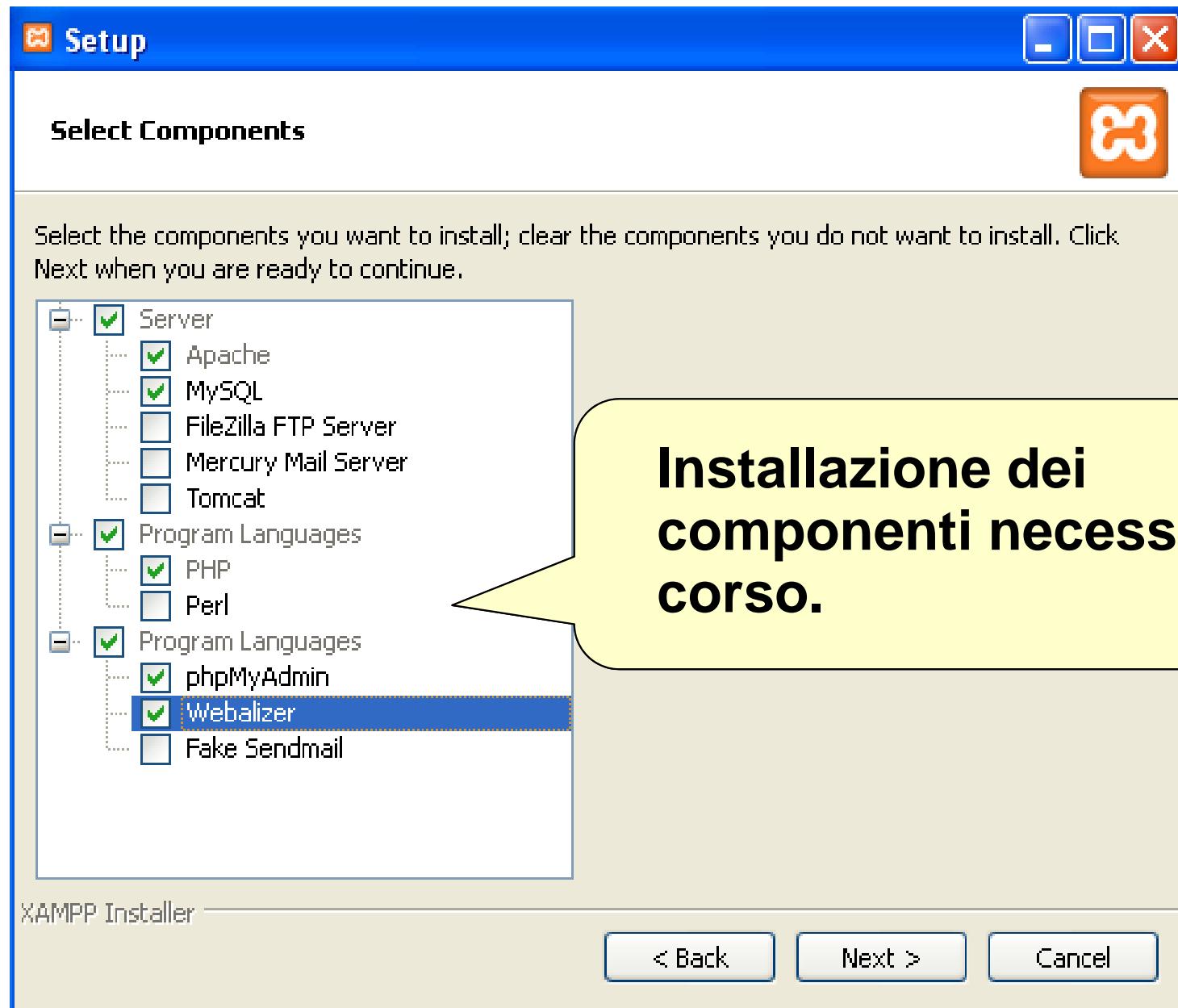
- GNU/Linux
  - Apple Mac OS X

# Installazione di XAMPP in Windows 7

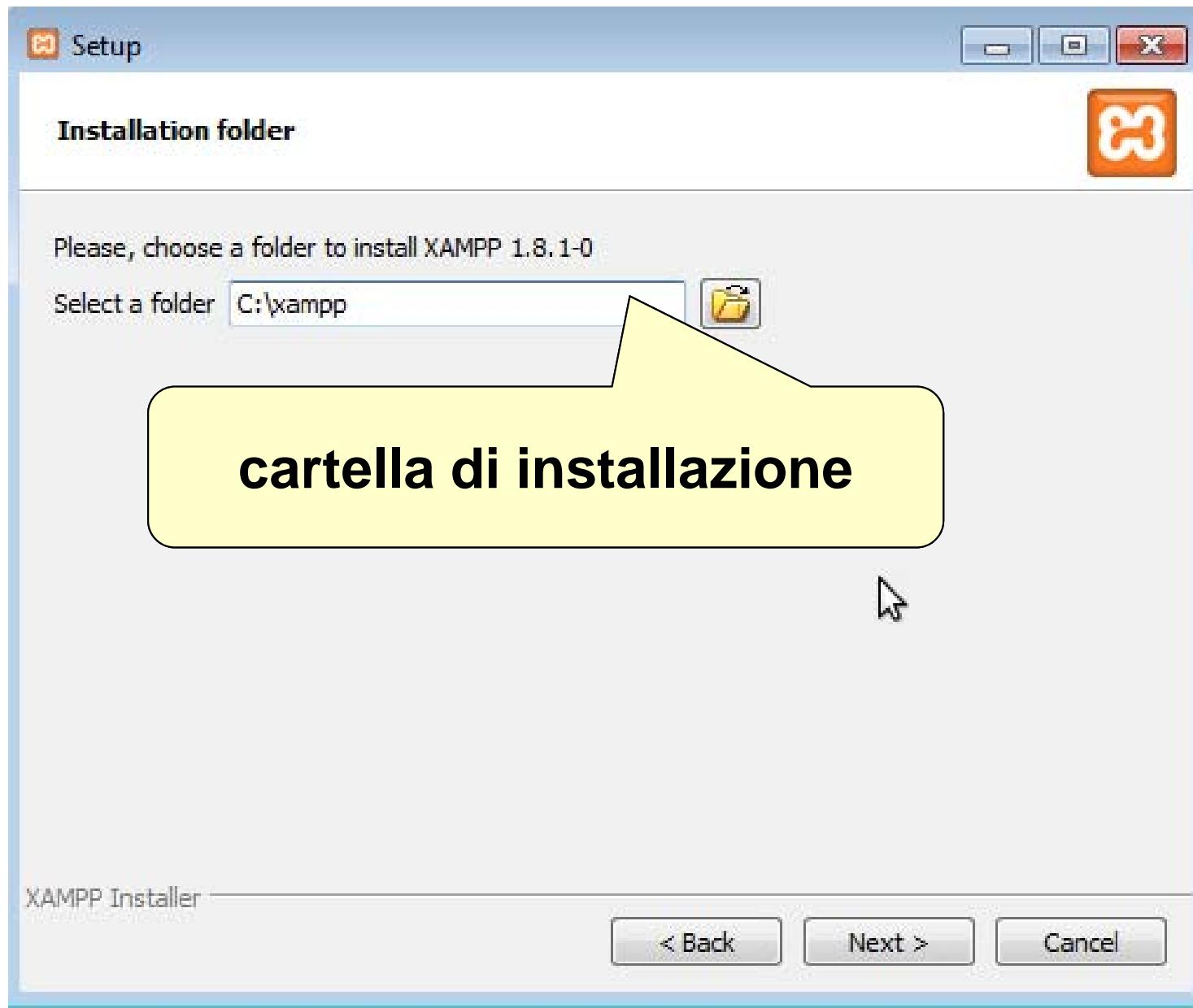


**avviare l'installazione con  
l'utente “Amministratore”**

# Installazione di XAMPP in Windows 7



# Installazione di XAMPP in Windows 7



# Installazione di XAMPP in Windows 7



# Avvio di XAMPP



# XAMPP – Pannello di controllo

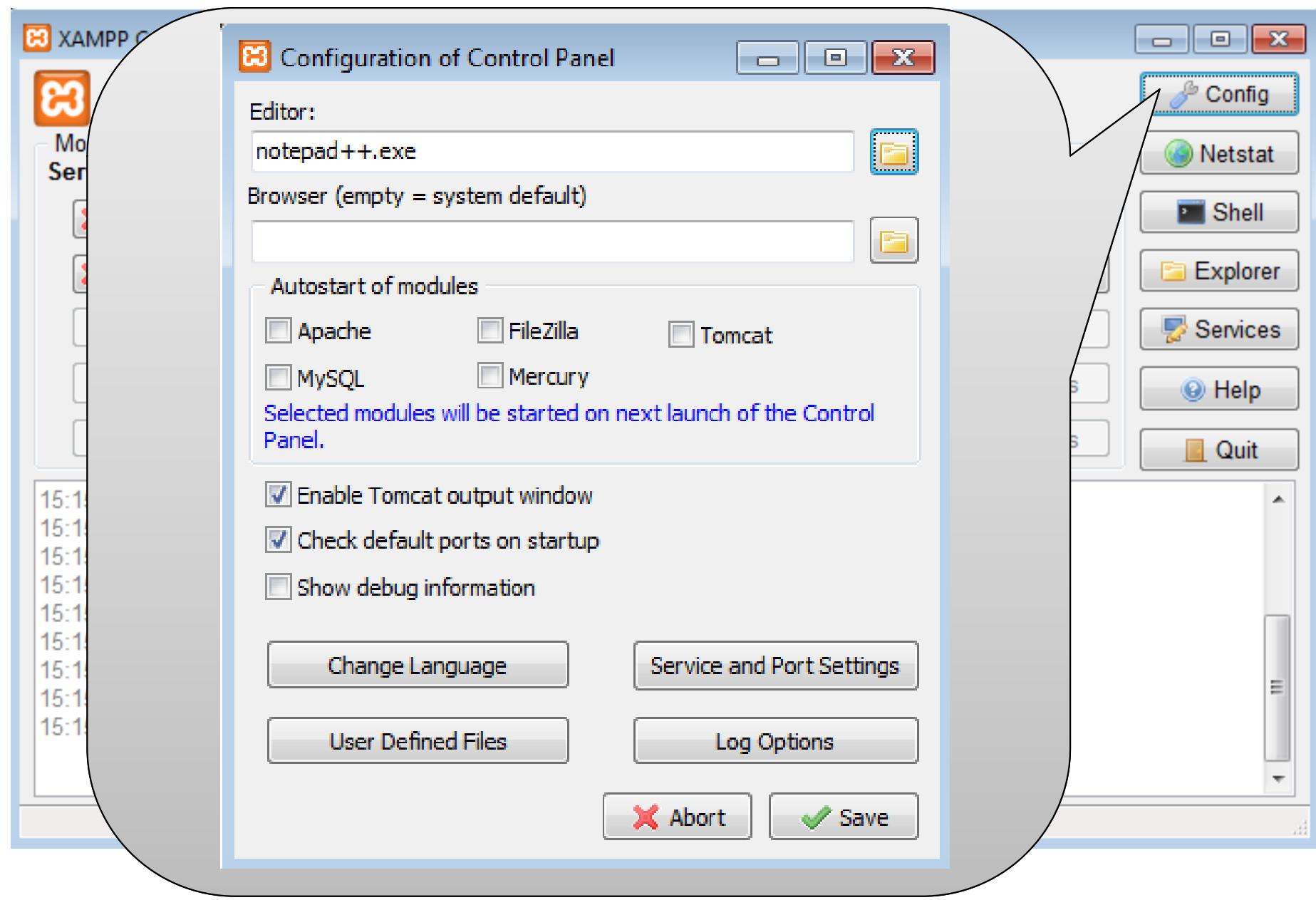
XAMPP Control Panel v3.1.0 3.1.0 [ Compiled: September 20th 2012 ]

**XAMPP Control Panel v3.1.0 3.1.0**

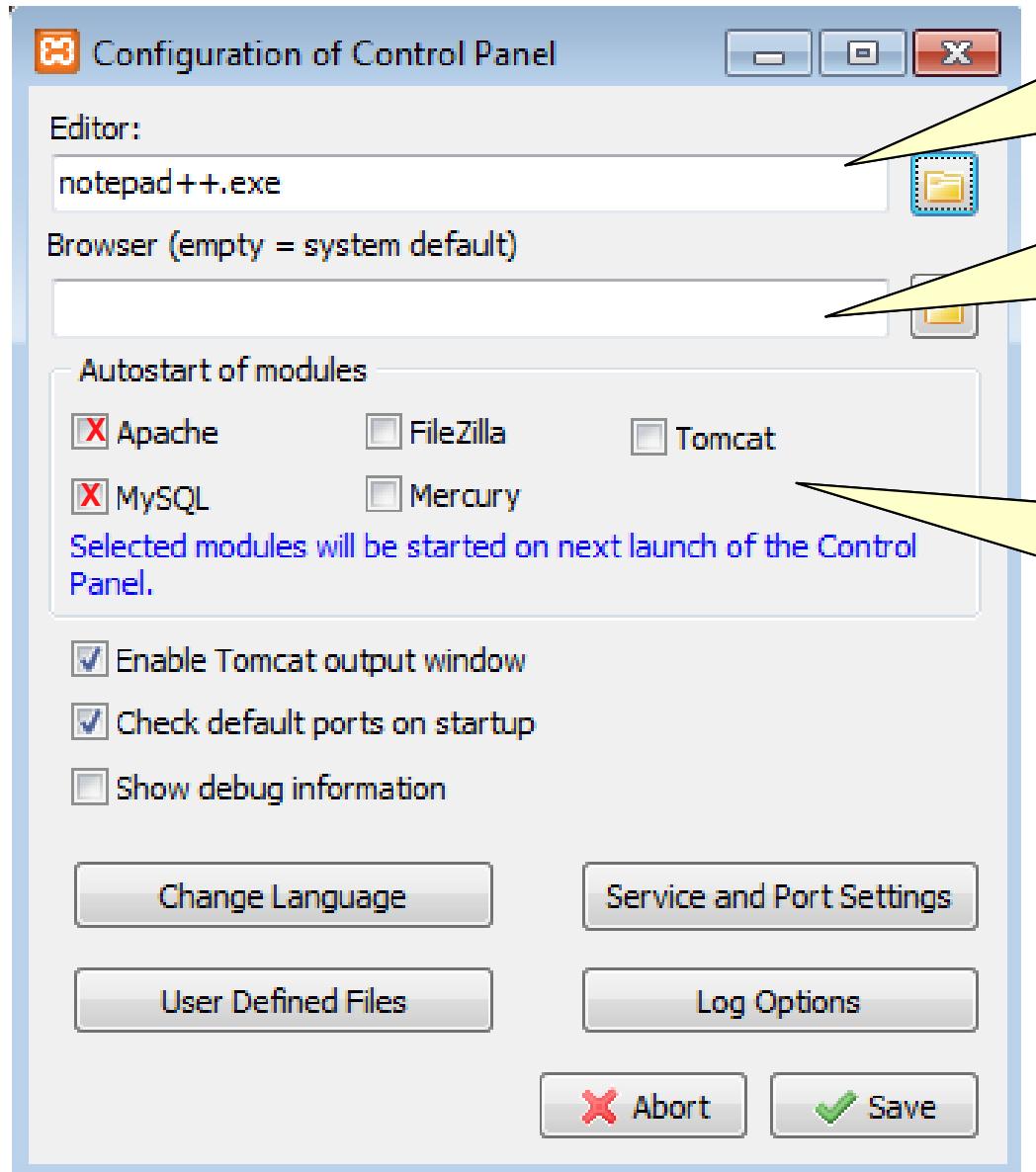
Service	Module	PID(s)	Port(s)	Actions
<input checked="" type="checkbox"/>	Apache			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>
<input checked="" type="checkbox"/>	MySQL			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	FileZilla			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	Mercury			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	Tomcat			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>

```
15:15:42 [main]      XAMPP Installation Directory: "c:\xampp\"  
15:15:48 [main]      Checking for prerequisites  
15:15:50 [main]      All prerequisites found  
15:15:50 [main]      Initializing Modules  
15:15:50 [main]      The FileZilla module is disabled  
15:15:50 [main]      The Mercury module is disabled  
15:15:50 [main]      The Tomcat module is disabled  
15:15:50 [main]      Starting Check-Timer  
15:15:50 [main]      Control Panel Ready
```

# XAMPP – Impostazioni generali



# XAMPP – Impostazioni generali

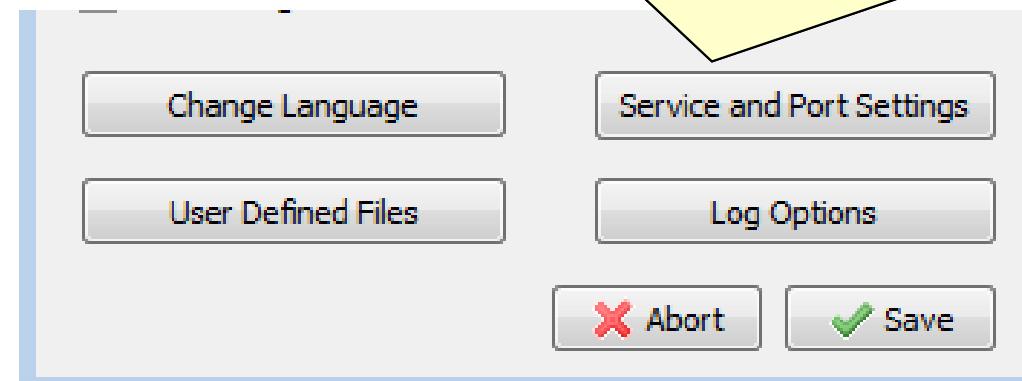
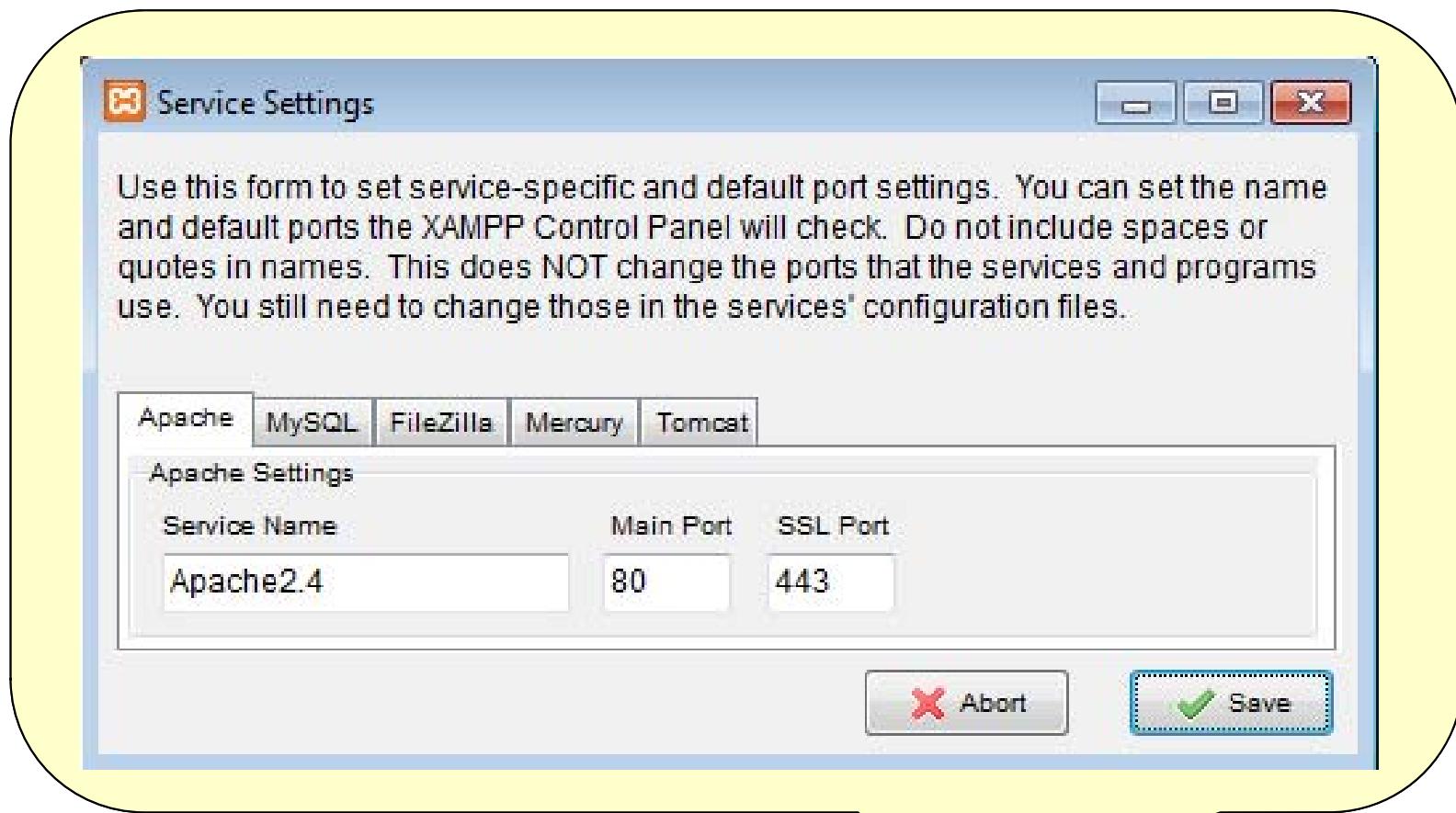


**editor di testo per le configurazioni**

**browser predefinito**

**avvio automatico dei servizi**

# XAMPP – Impostazioni servizio



# Apache

- **HTTP server**
  - ospita pagine HTML statiche
- **application server**
  - ospita pagine/applicazioni dinamiche (es. PHP)
    - attraverso caricamento di un modulo (es. PHP)
    - file con estensione “.php” (o altro: configurabile!)
- **pagine/applicazioni posizionate nella “Document Root”**
- **configurazione di default**
  - HTTP porta 80/TCP
  - HTTPS porta 443/TCP

# Avvio di Apache

The screenshot shows the XAMPP Control Panel v3.1.0 interface. On the left, there's a list of services: Apache (disabled), MySQL (disabled), FileZilla (disabled), Mercury (disabled), and Tomcat (disabled). The Apache row has a yellow callout box over the 'Start' button containing the text 'avvio di Apache'. To the right of the services is a column of buttons for each: Start, Admin, Config, and Logs. On the far right, there's a vertical toolbar with icons for Config, Netstat, Shell, Explorer, Services, Help, and Quit. Below the service list is a terminal-like window displaying the Apache startup log:

```
15:15:42 [main]      XAMPP Installation Directory: "c:\xampp\"  
15:15:48 [main]      Checking for prerequisites  
15:15:50 [main]      All prerequisites found  
15:15:50 [main]      Initializing Modules  
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```

# Avvio di Apache

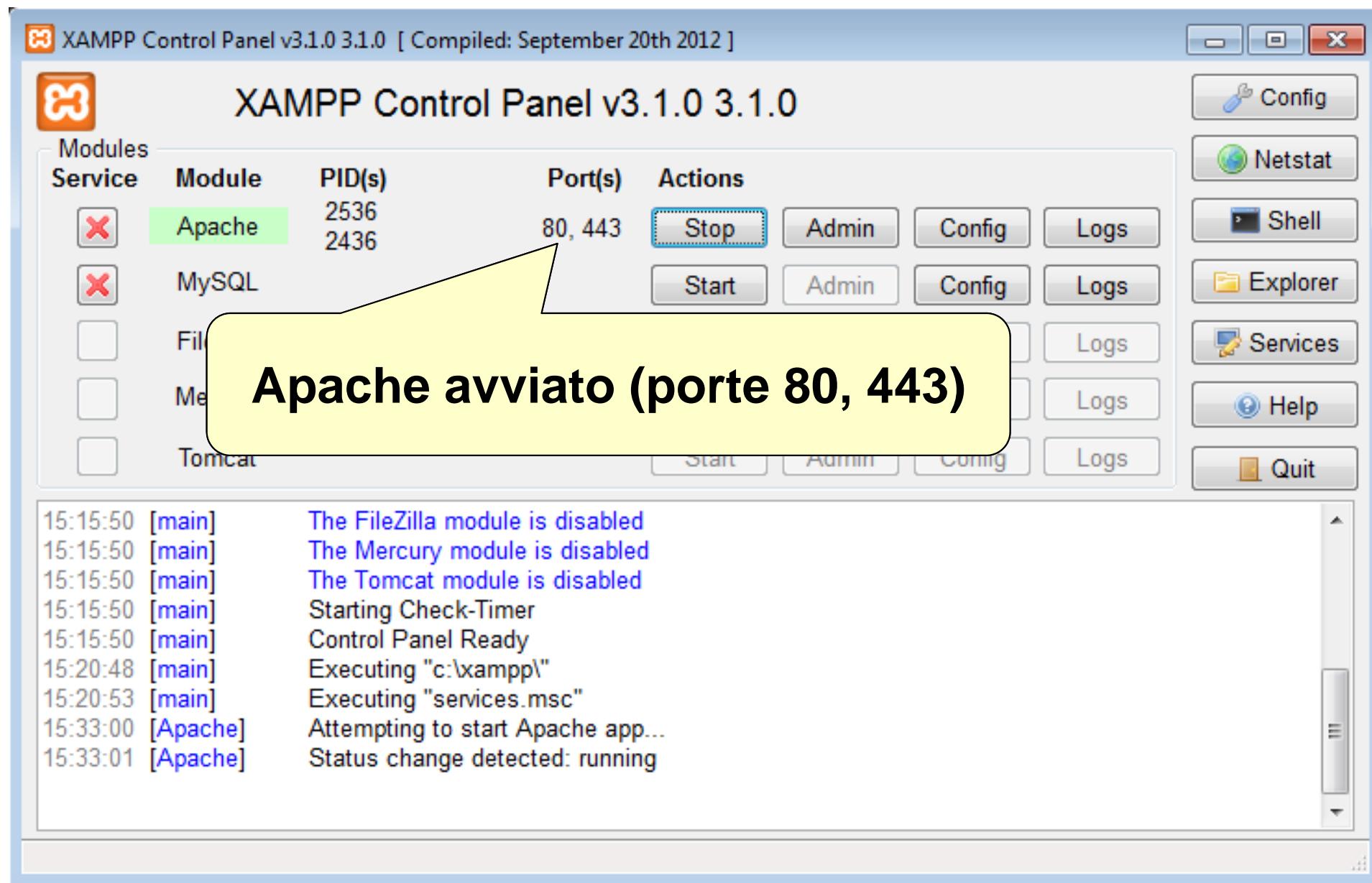
The screenshot shows the XAMPP Control Panel v3.1.0 interface. On the left, there's a sidebar with icons for MySQL, FileZilla, Mercury, and Tomcat. The main area displays the Apache service status:

Module	PID(s)	Port(s)	Actions
Apache	2536 2436	80, 443	Stop (highlighted) Start Admin Config Logs
MySQL			Start Admin Config Logs
FileZilla			Logs
Mercury			Logs
Tomcat			Logs

A yellow callout box points to the "Apache" row, containing the text "identificativo/i del processo/i". Below the table, a log window shows the following entries:

```
15:15:50 [main] The FileZilla module is disabled
15:15:50 [main] The Mercury module is disabled
15:15:50 [main] The Tomcat module is disabled
15:15:50 [main] Starting Check-Timer
15:15:50 [main] Control Panel Ready
15:20:48 [main] Executing "c:\xampp\"
15:20:53 [main] Executing "services.msc"
15:33:00 [Apache] Attempting to start Apache app...
15:33:01 [Apache] Status change detected: running
```

# Avvio di Apache



# Stop di Apache

XAMPP Control Panel v3.1.0 3.1.0 [ Compiled: September 20th 2012 ]

XAMPP Control Panel v3.1.0 3.1.0

Service	Module	PID(s)	Port(s)	Actions
<input checked="" type="checkbox"/>	Apache	2536 2436	80, 443	<input type="button" value="Stop"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/> <input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>
<input checked="" type="checkbox"/>	MySQL			<input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	FileZilla			<input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	Mercury			<input type="button" value="Config"/> <input type="button" value="Logs"/>
<input type="checkbox"/>	Tomcat			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Logs"/>

stop di Apache

```
15:15:50 [main] The FileZilla module is disabled
15:15:50 [main] The Mercury module is disabled
15:15:50 [main] The Tomcat module is disabled
15:15:50 [main] Starting Check-Timer
15:15:50 [main] Control Panel Ready
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15:20:53 [main] Executing "services.msc"
15:33:00 [Apache] Attempting to start Apache app...
15:33:01 [Apache] Status change detected: running
```

# Apache – file di configurazione e cartelle

## ■ cartella “DocumentRoot”

- dove posizionare le pagine/applicazioni web
- “C:\xampp\htdocs” (in MS Windows)

## ■ cartella “ServerRoot”

- dove Apache viene installato
- “C:\xampp\apache” (in MS Windows)

## ■ file configurazione principale

- porte in ascolto, moduli da caricare, ...
- “C:\xampp\apache\conf\httpd.conf” (in MS Windows)

## ■ file configurazione XAMPP

- usato per integrare i componenti (es. PHP, database, ...)
- “C:\xampp\apache\conf\extra\httpd-xampp.conf” (in MS Windows)

# Apache - accesso ai file di configurazione

XAMPP Control Panel v3.1.0 3.1.0 [ Compiled: September 20th 2012 ]

**XAMPP Control Panel v3.1.0 3.1.0**

Service	Module	PID(s)	Port(s)	Actions
<input checked="" type="checkbox"/>	Apache			<button>Start</button> <button>Admin</button> <a href="#">Config</a>
<input checked="" type="checkbox"/>	MySQL			<button>Start</button> <button>Admin</button> <a href="#">Netstat</a>
<input type="checkbox"/>	FileZilla			<button>Start</button> <button>Admin</button> <a href="#">Shell</a>
<input type="checkbox"/>	Mercury			<button>Start</button> <button>Admin</button> <a href="#">Config</a>
<input type="checkbox"/>	Tomcat			<button>Start</button> <button>Admin</button> <a href="#">Netstat</a>

Modules

Apache (httpd.conf)  
Apache (httpd-ssl.conf)  
Apache (httpd-xampp.conf)  
PHP (php.ini)  
phpMyAdmin (config.inc.php)  
<Browse> [Apache]  
<Browse> [PHP]  
<Browse> [phpMyAdmin]

```
15:15:50 [main] All prerequisites found
15:15:50 [main] Initializing Modules
15:15:50 [main] The FileZilla module is disabled
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15:15:50 [main] Starting Check-Timer
15:15:50 [main] Control Panel Ready
15:20:48 [main] Executing "c:\xampp\"
15:20:53 [main] Executing "services.msc"
```

# Apache – estratto httpd.conf

```
...
ServerName localhost:80
...
ServerRoot "C:/xampp/apache"
...
DocumentRoot "C:/xampp/htdocs"
...
Listen 80
...
LoadModule auth_basic_module modules/mod_auth_basic.so
LoadModule mime_module modules/mod_mime.so
LoadModule cgi_module modules/mod_cgi.so
```

# PHP

- **modulo installato sul server**
  - caricato/utilizzato da application server
    - configurazione interna all'application server
  - configurazione del modulo PHP
    - impostazioni specifiche (es. upload di file, sessioni, ...)
- **integrato e preconfigurato in XAMPP**
  - installato in C:\xampp\php\ (in MS Windows)
  - file configurazione Apache
    - C:\xampp\apache\conf\extra\httpd-xampp.conf  
(in MS Windows)
  - file configurazione modulo PHP
    - C:\xampp\php\php.ini (in MS Windows)

# PHP – file di configurazione per Apache

XAMPP Control Panel v3.1.0 3.1.0 [ Compiled: September 20th 2012 ]

**XAMPP Control Panel v3.1.0 3.1.0**

Service	Module	PID(s)	Port(s)	Actions
<input checked="" type="checkbox"/>	Apache			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Log"/>
<input checked="" type="checkbox"/>	MySQL			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Log"/>
<input type="checkbox"/>	FileZilla			<input type="button" value="Start"/> <input type="button" value="Admin"/> <input type="button" value="Config"/> <input type="button" value="Log"/>
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Modules

Apache (httpd.conf)  
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**Apache (httpd-xampp.conf)**    
PHP (php.ini)  
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<Browse> [Apache]  
<Browse> [PHP]  
<Browse> [phpMyAdmin]

```
15:15:50 [main] All prerequisites found
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15:15:50 [main] Starting Check-Timer
15:15:50 [main] Control Panel Ready
15:20:48 [main] Executing "c:\xampp\"
15:20:53 [main] Executing "services.msc"
```

# PHP – estratto httpd-xampp.conf

```
LoadFile "C:/xampp/php/php5ts.dll"
LoadModule php5_module "C:/xampp/php/php5apache2_4.dll"

<FilesMatch "\.php$"
    SetHandler application/x-httpd-php
</FilesMatch>
<FilesMatch "\.phps$">
    SetHandler application/x-httpd-php-source
</FilesMatch>
```

**software che implementa PHP**

# PHP – file di configurazione per PHP

The screenshot shows the XAMPP Control Panel v3.1.0 interface. On the left, there's a list of services: Apache (disabled), MySQL (disabled), FileZilla, Mercury, and Tomcat. The Apache service is highlighted with a red 'X' icon. On the right, there's a table with columns: Service, Module, PID(s), Port(s), and Actions (Start, Admin, Config). A context menu is open over the Apache 'Config' button, listing several options: Apache (httpd.conf), Apache (httpd-ssl.conf), Apache (httpd-xampp.conf), PHP (php.ini) (which is highlighted with a red rectangle), phpMyAdmin (config.inc.php), <Browse> [Apache], <Browse> [PHP], and <Browse> [phpMyAdmin]. A yellow callout bubble points from the text 'file di configurazione per impostazioni specifiche PHP' to the 'PHP (php.ini)' option in the context menu. At the bottom, a log window shows the following entries:

- 15:15:50 [main] Control Panel Ready
- 15:20:48 [main] Executing "c:\xampp\"
- 15:20:53 [main] Executing "services.msc"

file di configurazione per  
impostazioni specifiche PHP

# Apache - verifica installazione

- caricare il file "ciao.html" nella DocumentRoot di Apache
  - C:\xampp\htdocs (in MS Windows)
- aprire il browser alla URL:
  - http://localhost/ciao.html

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN"  
    "http://www.w3.org/TR/html4/strict.dtd">  
<html>  
  <head>  
    <title>Saluti HTML</title>  
  </head>  
  <body>  
    <p>Ciao!</p>  
  </body>  
</html>
```

ciao.html

# PHP - verifica installazione

- caricare il file "ciao.php" nella DocumentRoot di Apache
  - C:\xampp\htdocs" (in MS Windows)
- aprire il browser alla URL:
  - http://localhost/ciao.php

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN"  
    "http://www.w3.org/TR/html4/strict.dtd">  
<html>  
  <head>  
    <title>Saluti PHP</title>  
  </head>  
  <body>  
    <p><?php echo "Ciao da PHP!" ?></p>  
  </body>  
</html>
```

ciao.php

# Possibili conflitti

- a volte l'avvio di Apache (o di un altro servizio, es. MySQL) fallisce
- oltre ad errori nei file di configurazione, il fallimento può essere dovuto a porte già occupate
  - (WIN) le porte occupate in ascolto si vedono con  
`netstat -a | find "LISTENING"`
- caso tipico è Skype
  - Skype cerca sempre di occupare la porta 80/tcp se disponibile (creando così un conflitto con Apache che vorrebbe usare la stessa porta)
  - in questo caso terminare Skype e poi riprovare l'avvio di Apache
  - dopo che Apache è partito regolarmente, si può riavviare Skype (che sceglierà una porta diversa dalla 80/tcp per comunicare con i peer)