ABCD + iAH + BVS on IIS 6.0 under Windows Server 2003

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❖ Introduction

The purpose of this document is to give some basic help for installing the applications ABCD, iAH, and BVS over Internet Information Server (IIS). This document does not explain how to install IIS: it is assumed that this is correctly installed on the server and that you have administrator rights. It is also assumed that you are familiar with the applications ABCD, iAH and BVS, and have experience in the installation and customization of applications in general on the Windows platform.

Note:

The installation under Windows Server 2008, which uses IIS 7.0, is similar, although the graphic presentation of the screens is a little different.

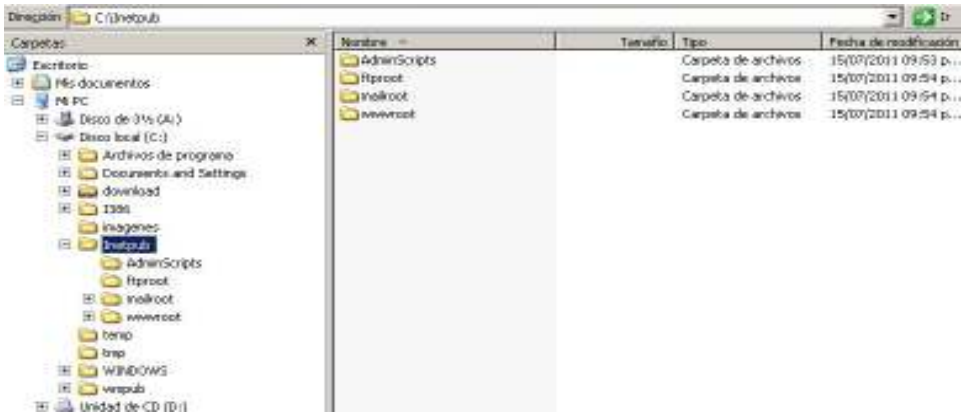
The installation procedure requires the following steps:

- Install PHP 5.3 under IIS 6.0.
- Install the applications **[ABCD | BVS | iAH]** under a root directory (wwwroot is used).
- Create a website for each application that includes its own virtual cgi-bin directory.
- Assign the necessary rights to the IUSR user created for IIS under the various folders in the File System
- Customise the parameter files for each application.

In the examples which follow we are installing the BVS package which includes iAH v.2.6 on port 80, and ABCD with iAH v.3.1 on port 9090.

❖ Procedure

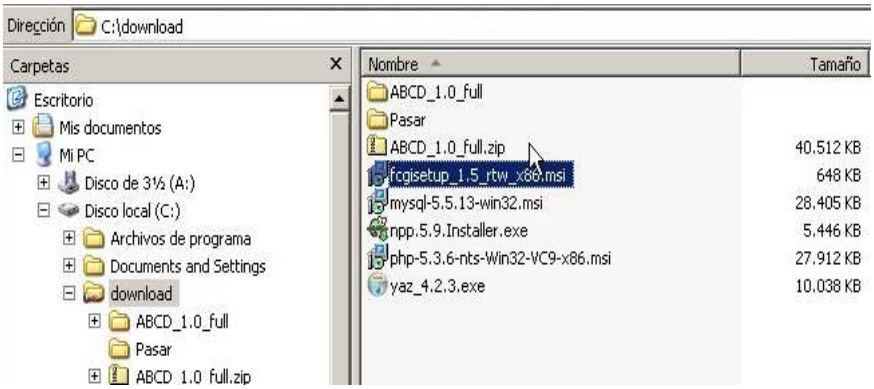
We begin with a "virgin" installation of IIS, i.e. we have none of our applications installed nor PHP[1]. Our directory looks like the image below. On our computer IIS is installed on **`C:\`** and its principal directory is **`C:\Inetpub`**.



[1] iAH does not require PHP

1. Install PHP under IIS 6.0

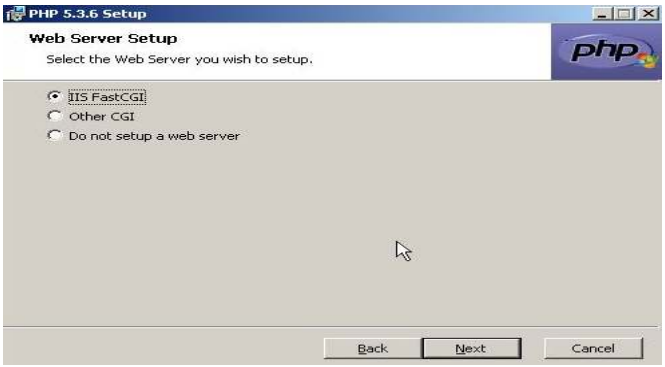
IIS requires a different installation of PHP from that used in Apache. For this we must first obtain the application **`fastcgi`**. This application is installed by means of **`fcgisetup_1.5_rtw_x86.msi`** (check that you have the new version for IIS 6.0) and can be downloaded from the site www.iis.net/extensions/fastcgi.



Download the installer of **`fastcgi`** into any directory and execute the **`.msi`** file in the same way as any program.

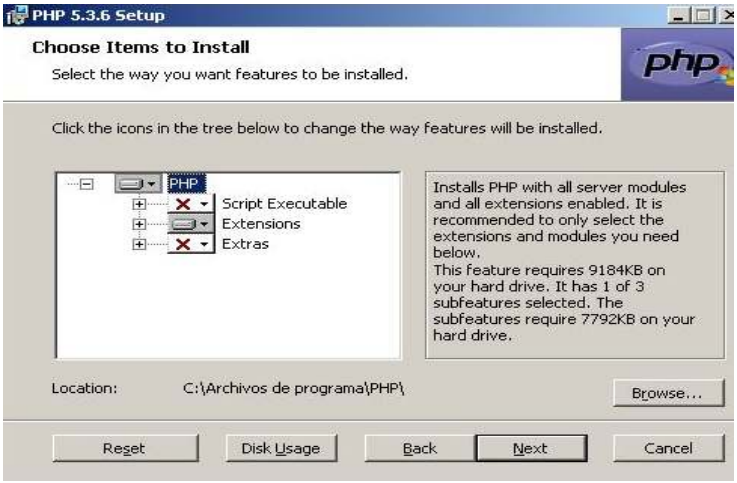
After installing **`fastcgi`** you need to install **`php-5.3.6-nts-Win32-VC9-x86.msi`** which is on the site http://windows.php.net/download (select everything shown on the site).

To start the installation of PHP, select the option "IIS FastCGI".



If fastcgi has not already been installed, a message will appear like the one in the figure.





If fastcgi is installed, the message on the left will appear. Select all the options for a complete installation and click "**`Next`**".

Once the installation of PHP is complete, you need to verify that the file **PHP.ini** contains all the necessary instructions. This file should be found in **c:\Program Files\PHP**. Verify that below **C:\Windows** there does not exist a previous PHP.ini from another installation because in this case there can be conflicts.

In the PHP.ini file, check if the following lines need be added or modified:

```
cgi.fix_pathinfo=1 ← uncomment this line
short_open_tag = Off ← set to On

;;;;;;;;;;;;;;;;;;
; Fopen wrappers ;
;;;;;;;;;;;;;;;;;;
...
cgi.force_redirect=0
fastcgi.impersonate=1
fastcgi.logging=0
extension_dir="C:\Program Files\PHP\ext"
```

At the end of the **PHP.ini** file you should add the four lines above.

The next step to complete the configuration of PHP for IIS requires running an instruction from the MS-DOS command prompt:

```
C:\> cscript %windir%\system32\inetsrv\fcgiconfig.js -add -section:"PHP" ^
 -extension:php -path:"C:\Program Files\PHP\php-cgi.exe"
```

Note: the symbol ^ signifies continuation of the line.

When the process ends, verify that the following lines appear at the end of the file **fcgiext.ini** :

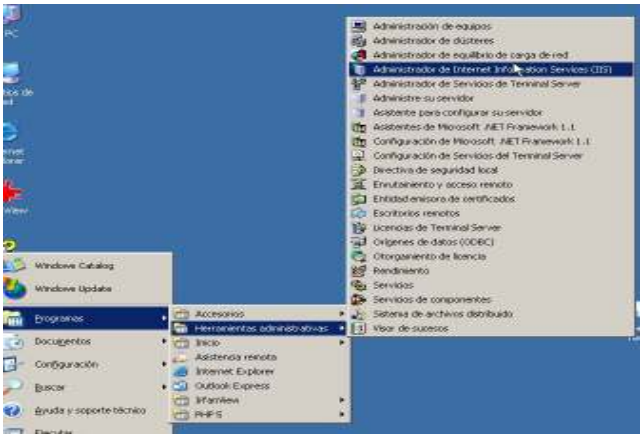
C:\WINDOWS\system32\inetsrv\fcgiext.ini

```
 ...
[Types]
php=PHP

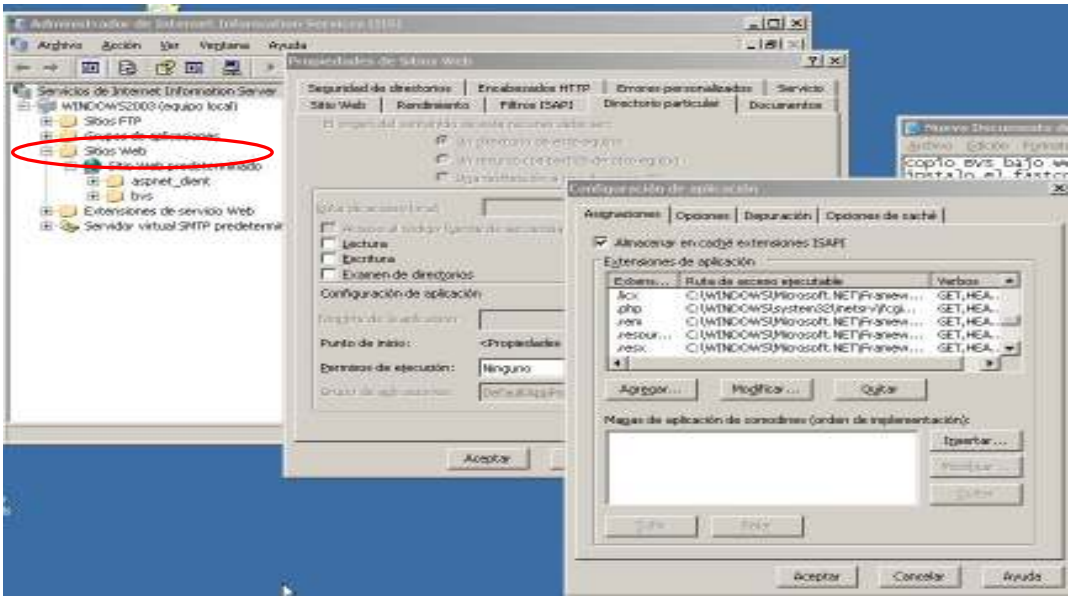
[PHP]
ExePath=C:\Program files\PHP\php-cgi.exe
InstanceMaxRequests=10000
ActivityTimeout=600
RequestTimeout=600
EnvironmentVars=PHP_FCGI_MAX_REQUESTS:10000,PHPRC:C:\Program files\PHP\
```

Then we need to start IIS, which is done using the Start... button

- **Start / Programs / Administrative tools / IIS Administrator** (see figure)



Proceed to check that the extension .php has been added, click the right button on the option "Website" and select ***Properties / Special directory / Configuration***"

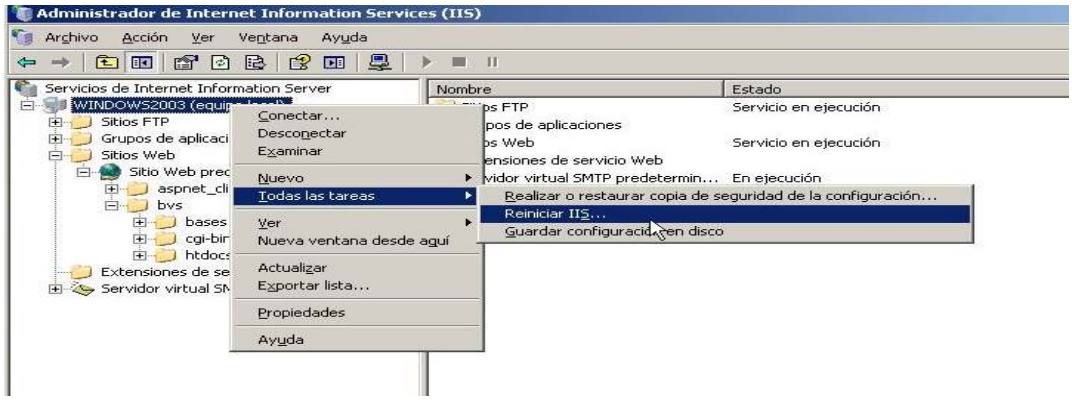


Then go to "***Web service extensions***" and verify that "***FastCGI Handler***" is permitted, and in the same way permit all the CGI extensions.



From the "IIS Administrator" proceed to restart the Server:

- Right click on the server (in the example it is called Windows 2003) and then select:
All tasks / Restart IIS



Verify that the server is active:

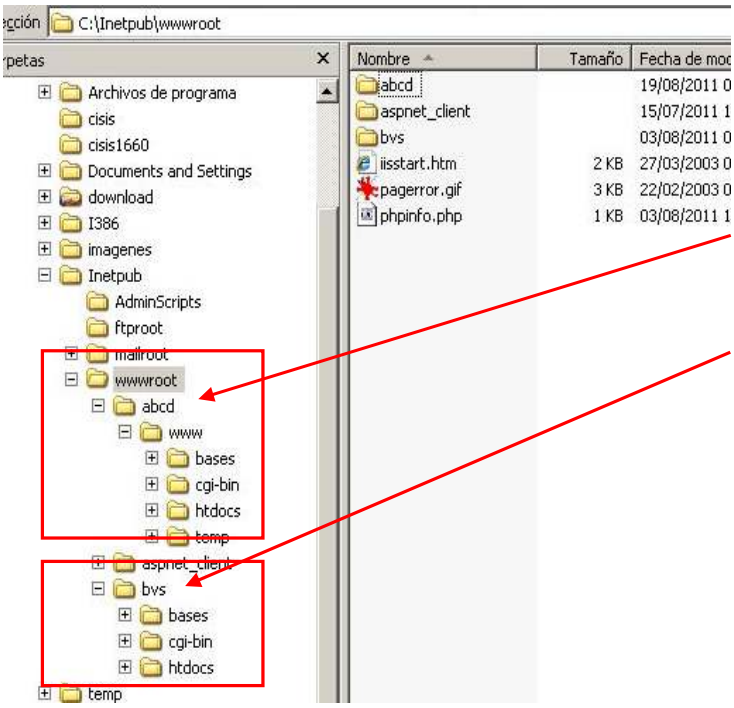
- **Start / Programs / Administrative tools / Services** and check the entry "**World Wide Web publication services**"



This completes the installation of PHP 5.3 on IIS 6.0.

2. Copy the applications ABCD/BVS/iAH under the root directory of the server

The installation packages can be copied into any directory and later the necessary redirections (paths) can be set up. However, to make a simpler explanation we will put them all below the default directory that IIS uses as root. This directory is **c:\Inetpub\wwwroot** which is equivalent to **\htdocs** that we normally use with Apache.



As can be seen in the figure on the left, we have copied the two complete folders of the applications ABCD and BVS as they are distributed through the download site of BIREME.

The ABCD package is copied below the directory **wwwroot**, and below ABCD are the subdirectories **bases**, **cgi-bin**, **htdocs** and **temp**.

In a similar way, BVS is below the directory **wwwroot**, and below BVS are its three subdirectories: **bases**, **cgi-bin** and **htdocs**.

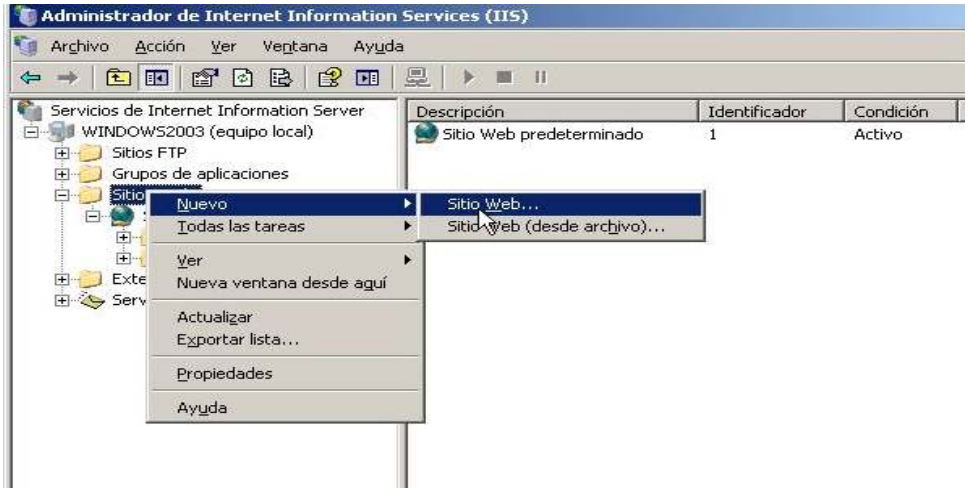
After installing the packages we can proceed to making each one a website.

3. Create a website for each application which includes its own virtual cgi-bin directory

3.1 Creation of the website

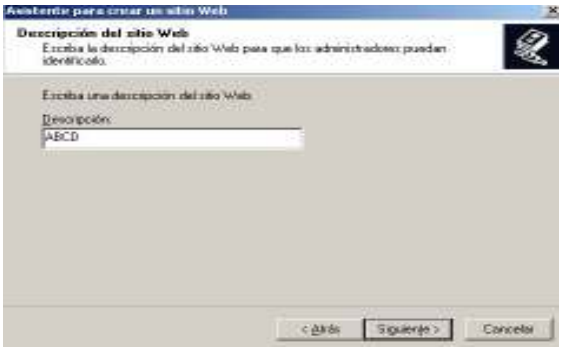
- Go to the Administration of IIS
  `Start / Programs / Administrative tools / IIS Administrator`

Right-click on the folder: **`Website / New / Website`**



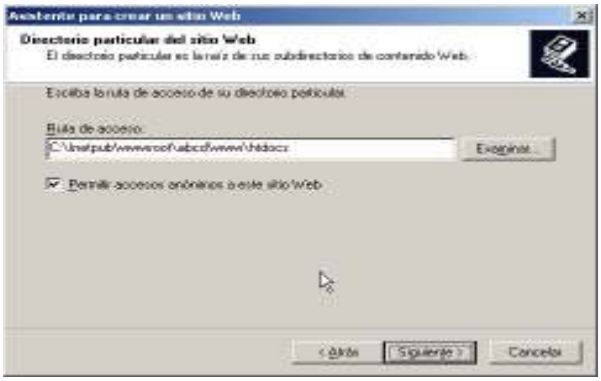
The creation of a new site is managed by the wizard "*Website creation assistant"*, which goes through the steps described below.

Indicate a name for the website, which in our case is ABCD, and then assign a port, which here will be 9090.





Indicate the root directory of the site



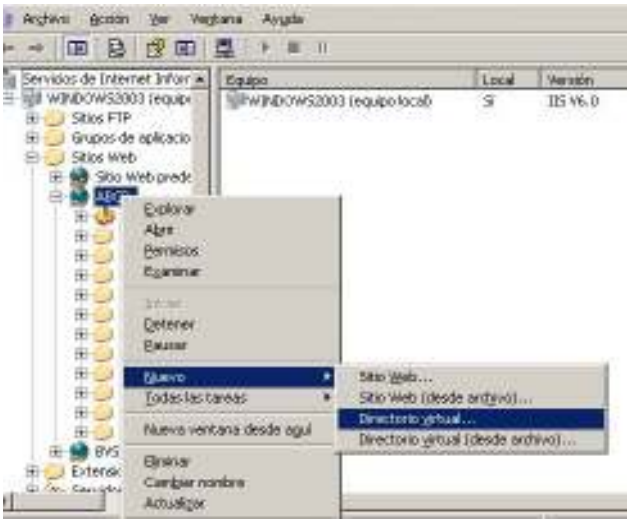
Assign permissions for executing programs through CGI

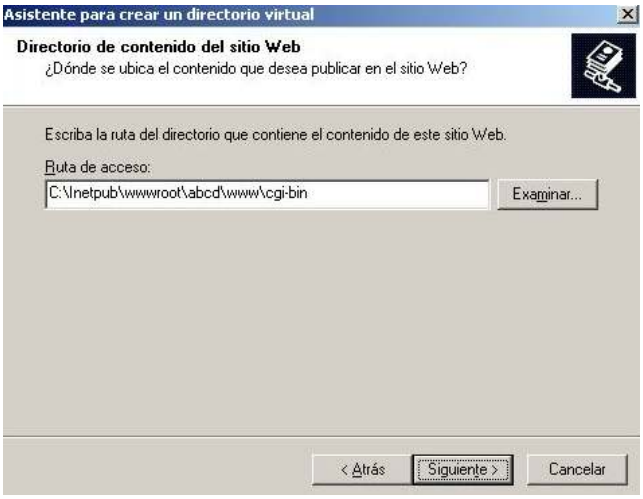


Next we need to create a virtual directory for the **`cgi-bin`** folder.

From IIS Administration, right-click on the ABCD folder (now marked as server with the globe icon) and follow the instructions of the Assistant. When you are asked for an "alias" simply indicate cgi-bin and the path will be the physical address were the cgi-bin folder is, which in our case is indicated in the figure.

`New / Virtual directory`

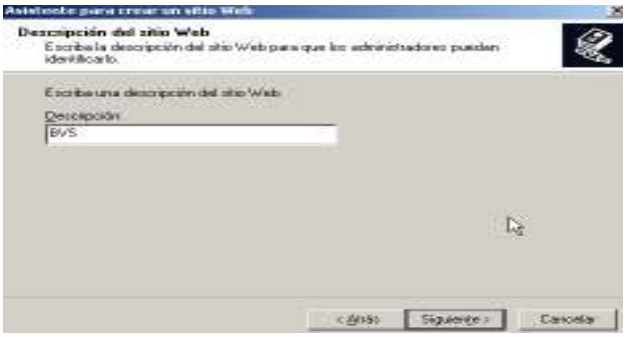




This ends the installation of ABCD under IIS 6.0

- **To install BVS involves a similar process**

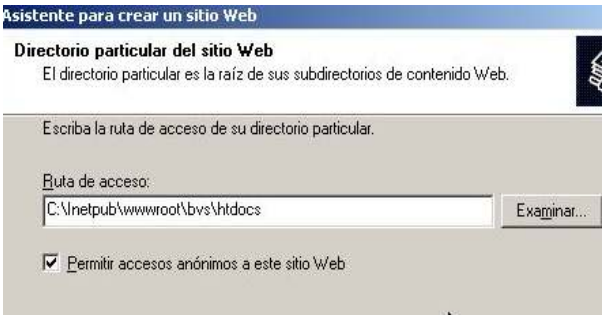
Assign a name for the site: BVS



Assign the port: 80 (default)



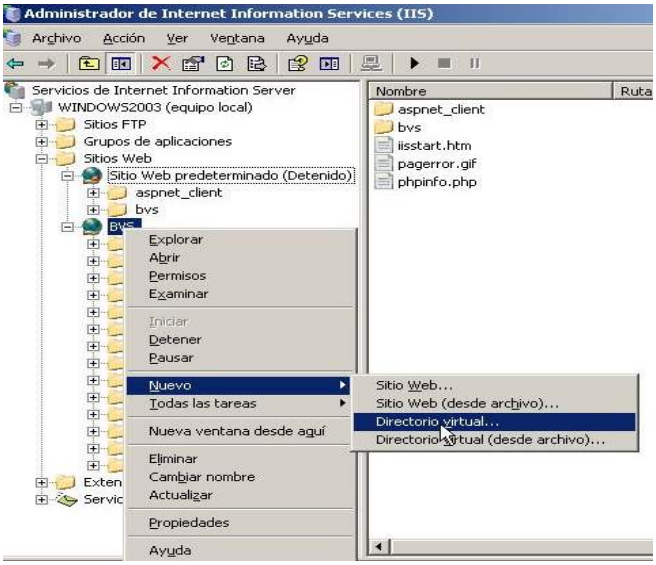
Assign the root of the site



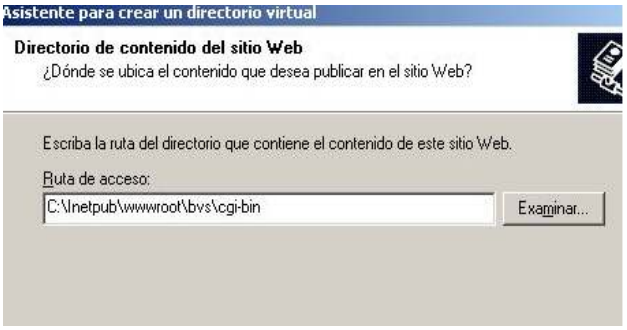
Assign permissions for CGI programs



Create the virtual directory for cgi-bin



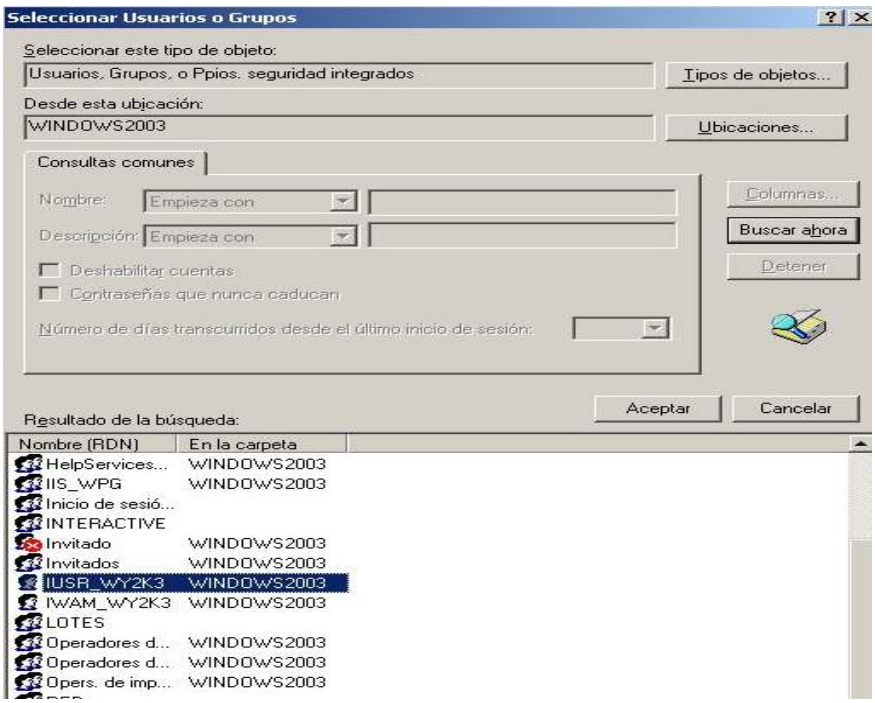
Path of the cgi-bin directory for this application



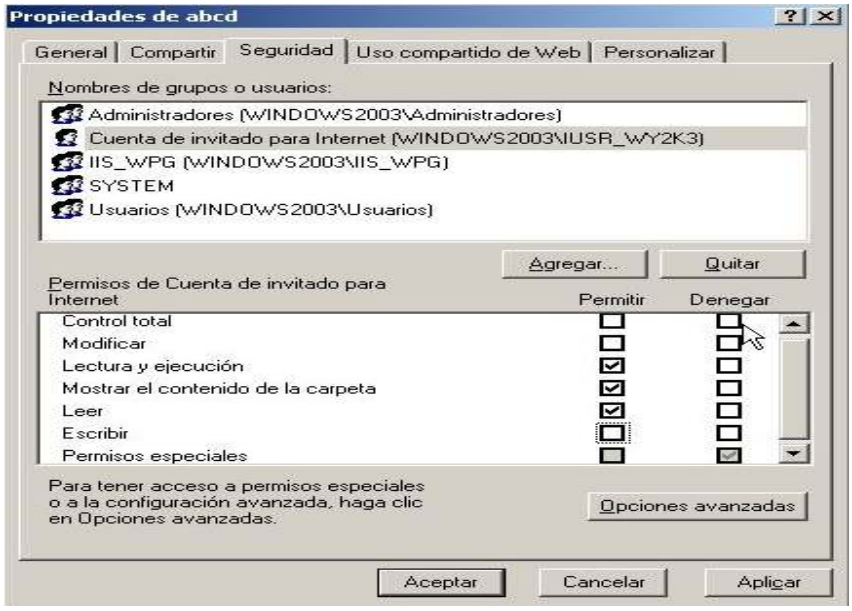
4. Assign the necessary rights to the user IUSR

IUSR is the anonymous user with which IIS is executed by default. This user is created automatically in the installation of IIS. The name is formed from **`IUSR + <name of the server>`**: in this example it is called IUSR_WY2L3.

To add rights for IUSR in a folder do as follows: right-click on the folder and select: **`properties / Security / button Agree / option Advanced.`** Click the button "**`search now`**" and a table appears like the figure below including the IUSER, and then press the button "Accept".

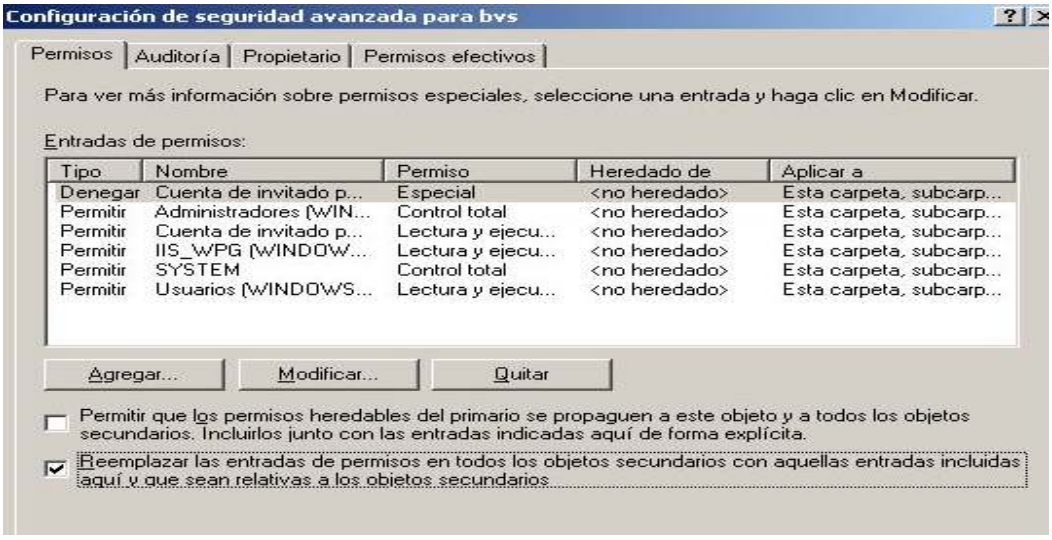


It is recommended to give IUSR permissions at the root of the site (in this case ABCD) only to read, execute and display contents. Later in the folders below this you can give more specific rights for the directories that need to have write and modify permissions.

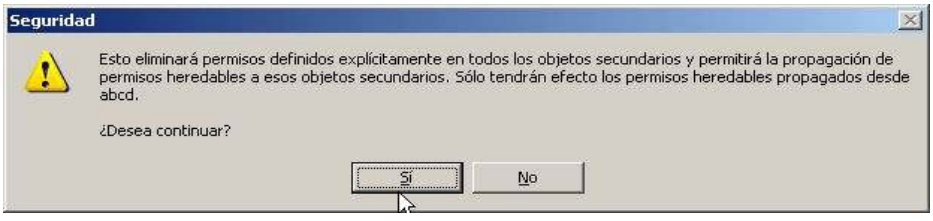


The sequence of buttons now is important: pay attention to the order in which you execute the instructions. When you addign the rights click Apply (not to be confused with Accept).

Then select "*advanced options*" and on the following screen select only the checkbox next to "*Replace*…. "



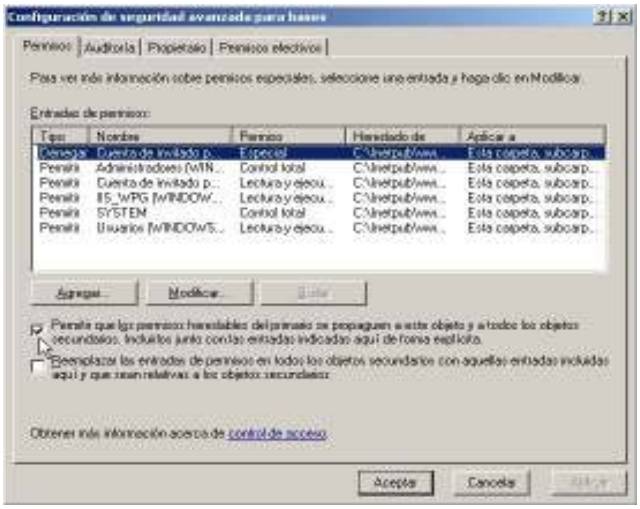
Click "Accept" and the following notice appears:

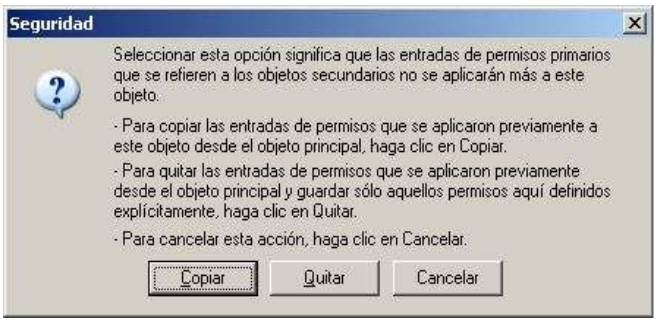


Click YES and the basic permissions assigned to the root will be inherited by all the folders below.

Next you should assign write permission in the folders **bases, cgi-bin** and **htdocs/local.** As an example we consider only ABCD/bases.

The basic thing is to remove the inherited property of the folder **ABCD/bases**. Right-click this folder and select **properties / security / advanced options** and remove the tick against "permit". Then the message will apear that is shown in the figure.

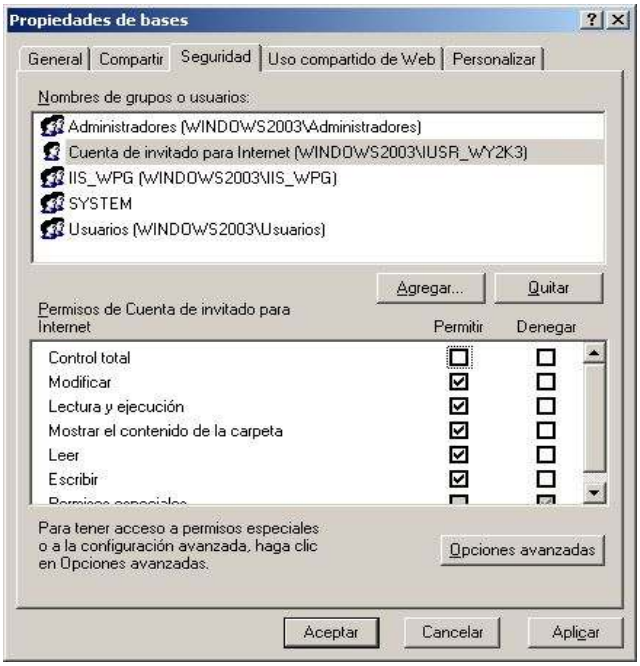


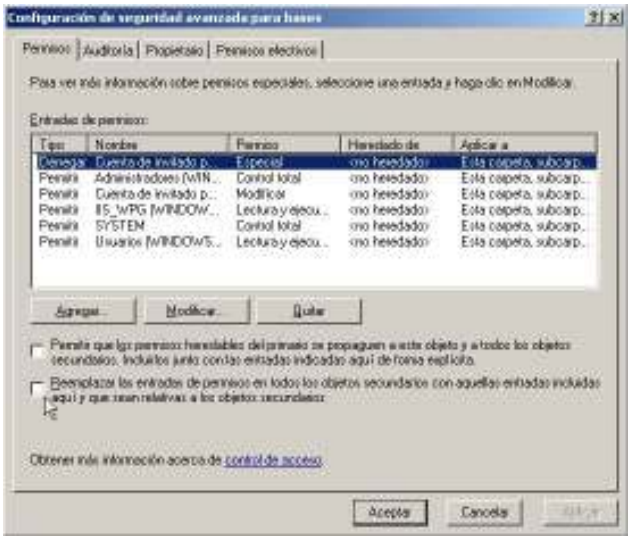


Select the option Copy and accept.

Next we need to modify the permissions of IUSR in the folder and respective subfolder, as shown in the following figures.

We assign the necessary rights to the folder and subfolders, click "Apply" and then "Advanced options".





Click the checkbox below, then Accept, reply YES and again Accept.

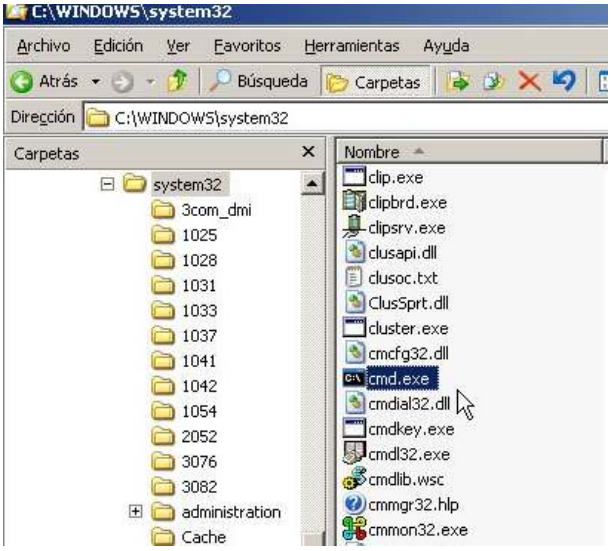
Additional permission to run ABCD

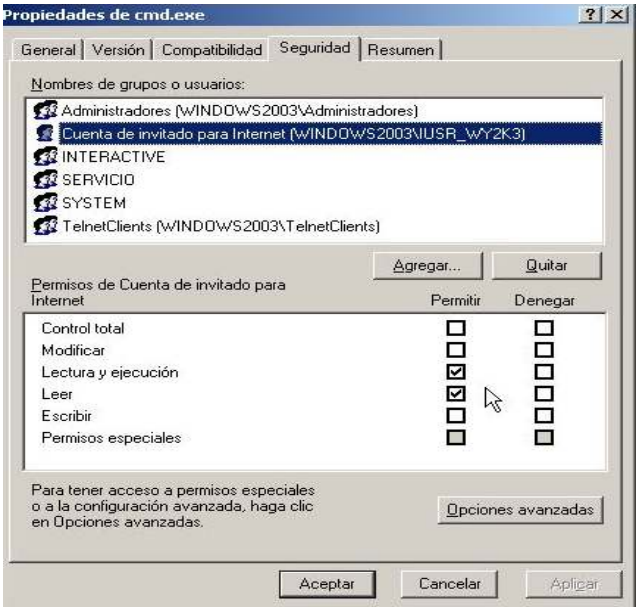
If you are using ABCD v.1.1 or higher, check the following file:

C:\inetpub\wwwroot\abcd\www\bases\abcd.def

si existe la linea: **MXPATH=C:/Inetpub/wwwroot/abcd/www/cgi-bin/**

If this is the case you must also give rights to **IUSR** to run the **cmd.exe** program. This program is in **c:\windows\system32**, right click button, **Properties / Security** and assign to **IUSR** *Read and Execute* rights as seen in the figures.





5. Customize the parameter files of each application

The final step is to adapt the configuration files for the applications, i.e. to set the correct roots for our installation. The following examples are adapted to the installation in this manual. Only the lines which must be modified are shown in the indicated files.

Customization for ABCD

- bvs-site-conf.php

```
C:\Inetpub\wwwroot\abcd\www\htdocs\bvs-site-conf.php

 SITE_PATH=/Inetpub/wwwroot/abcd/www/htdocs/site/
 DATABASE_PATH=/Inetpub/wwwroot/abcd/wwww/bases/
 LETTER_UNIT=C:
```

- iah.def (version 3.1)

```
c:\Inetpub\wwwroot\abcd\wwww\htdocs\iah\scripts\iah.def

 PATH_CGI-BIN=/Inetpub/wwwroot/ABCD/www/htdocs/iah/scripts/
 PATH_DATABASE=/Inetpub/wwwroot/ABCD/www/bases/
```

```
PATH_DEF=/Inetpub/wwwroot/ABCD/www/bases/par/
```

- ABCD /central/config.php

```
c:\Inetpub\wwwroot\abcd\wwww\htdocs\central\config.php

//Path to the databases
$db_path="/Inetpub/wwwroot/ABCD/www/bases/";

//Path to the folder where the uploaded images are to be stored (the database name will be added to this path)
$img_path="/Inetpub/wwwroot/abcd/www/htdocs/bases/";

//Path to the wwwisis executable (include the name of the program)
$Wxis="/Inetpub/wwwroot/ABCD/www/cgi-bin/wxis.exe";

//Path to the wxis scripts
$xWxis="/Inetpub/wwwroot/ABCD/www/htdocs/$app_path/dataentry/wxis/";
```

Customization for the BVS-Site

- BVS-Site

```
C:\Inetpub\wwwroot\bvs\htdocs\bvs-site-conf.php

 SITE_PATH=/Inetpub/wwwroot/bvs/htdocs/
 DATABASE_PATH=/Inetpub/wwwroot/bvs/bases/site/
 LETTER_UNIT=C
```

- iah.def (version 2.6)

```
c:\Inetpub\wwwroot\bvs\htdocs\iah\iah.def

 PATH_DATA=/iah/
 PATH_CGI-BIN=/Inetpub/wwwroot/bvs/cgi-bin/iah/
 PATH_DATABASE=/Inetpub/wwwroot/bvs/bases/iah/
```

❖ Acknowledgements

We have to thank Ing. Diego Muses, expert in IT, for help and cooperation in resolving this problem.

We thank Dr Andrew Buxton for the English translation.