Installing LUCI on Windows 2003

This installation guide should have been distributed with a modules folder. This folder can be used if you need to install Luci on a Windows 2003 box that can't access the Internet. The Luci installation process should not require a reboot.

Assumptions made:
- SSL is enabled
- Your www root is at c:\inetput\wwwroot. It doesn't have to be at this location; but for documentation purposes, we have stuck with the IIS default.

Step 1: Get Luci

You can download Luci from:
http://sourceforge.net/project/showfiles.php?group_id=117317

This document was created with Luci version 1.2.

Step 2: Install Perl

Download and install AcitvePerl from:
http://www.activestate.com/Products/ActivePerl/?psbx=1

We used ActivePerl version 5.8.8.816 for our LUCI installation.

We accepted c:\perl as the Perl installation path. You can click "Next" through all of the dialog screens until you reach the "Choose Setup Options" screen. We checked the items that LUCI required. This will give you the ability to either use the PERL.EXE or the PERLIS.DLL. We had memory issues with the EXE. In addition, an IIS application pool is unable to throttle CPU and memory usage of the PERL.EXE when used for CGI purposes. However, ISS can throttle the application pool when using the PERLIS.DLL and the DLL is much faster. For these reasons, we chose to use the PERLIS.DLL and this documentation is written for using the PERLIS.DLL.
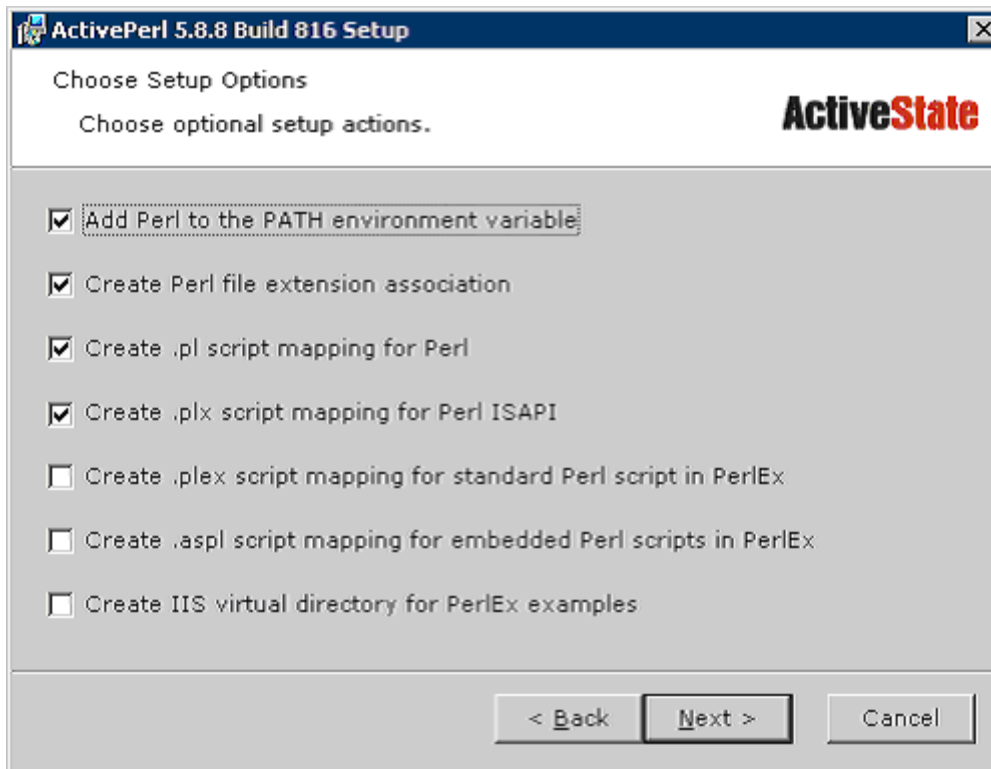
Step 3: Install Perl Modules required by LUCI

The following Perl modules are required by LUCI:
- Config-General (document uses version 2.31)
- Crypt-CBC (document uses version 2.8)
- Crypt-SSLeay (document uses version 0.51)
- Crypt-Twofish_PP (document uses version 0.17)
- HTML-Template (document uses version 2.8)
- libintl-perl (document uses version 1.16)

Step 3.a: Installing Perl Modules from the Internet

This section requires a connection to the Internet. If your Windows 2003 box can't connect to the Internet, skip to 3.b for instructions on how to install the modules from a local folder.

Installing Perl modules from the Internet can be tricky if your Windows 2003 box requires proxy access and proxy access hasn't been setup on the server. For proxy access, do the following:
1. Right Click on MyComputer and click properties.
2. Select the Advanced Tab.
3. Click on the "Environment Variables" button near the bottom of the screen.
4. Under "System Variables" click the "New" button.
5. Enter HTTP_Proxy for the variable name.
6. For the variable value, enter the url and port of your proxy server. Ex: http://myproxy.server.fun:8080   (don't forget the http at the beginning)
7. Press OK. Press OK.
8. Go to Start > Control Panel > Internet Options
9. Select the Connections tab and click the "Lan Settings" button.
10. Check the "Use a proxy server for your LAN" and enter your proxies address and port.
11. Open up Internet explorer and browse to a web address that will require proxy authentication (ex. www.google.com).   If your proxy requires a user name and password, enter in the login information.
12. Close Internet Explorer once you have successfully accessed an outside connection.
13. From the command prompt, type "proxycfg –u" without the quotes.

Proxy configuration is complete. Remember, it would be wise to remove the proxy configuration settings from the Windows 2003 box once you've completed installing the modules. Of course, remove these settings only if you implemented them for module installation. Here's how to remove the proxy configuration settings once module installation is complete:

1. Right Click on MyComputer and click properties.
2. Select the Advanced Tab.
3. Click on the "Environment Variables" button near the bottom of the screen.
4. Under "System Variables", select the "HTTP_Proxy" entry and click the delete button.
5. Press OK.
6. Go to Start > Control Panel > Internet Options
7. Select the Connections tab and click the "Lan Settings" button.
8. Uncheck the "Use a proxy server for your LAN"
9. From the command prompt, type "proxycfg –d" without the quotes.

You are now ready to install the modules from the Internet. Start the Perl Package Manager (Start > All Programs > ActivePerl). Run the following commands. The last two commands are case sensitive.

- install Config-General
- install HTML-Template
- install libintl-perl
- install Crypt-CBC
- install http://theoryx5.uwinnipeg.ca/ppms/Crypt-Twofish_PP.ppd
- install http://theoryx5.uwinnipeg.ca/ppms/Crypt-SSLeay.ppd
  - The installation of Crypt-SSLeay requires that the user place the DLLs in a local directory. Make sure that you specify c:\windows.

Step 3.b: Installing Perl Modules from a local directory

You can install the Perl modules from a local directory if your Windows 2003 box can't connect to the Internet. Extract the modules folder from the Win2003SetupDoc.zip. For documentation purposes, we placed the folder at c:\modules.

Move the libeay32.dll and ssleay32.dll from c:\modules and place them in c:\windows.

Start the Perl Package Manager (Start > All Programs > Active Perl > Perl Package Manager). Run the following commands.

- rep add modules c:\modules
- rep up modules
- install Config-General
- install HTML-Template
- install libintl-perl
- install Crypt-CBC
- install Crypt-Twofish_PP
- install Crypt-SSLeay

Close the Perl Package Manager. You can now delete c:\modules. This folder is no longer needed.

Step 4: Enable the Perl CGI Extension

Click on the "Web Service Extensions" folder in the IIS manager. Select "Perl ISAPI Extenstion" and click the "Allow" button.
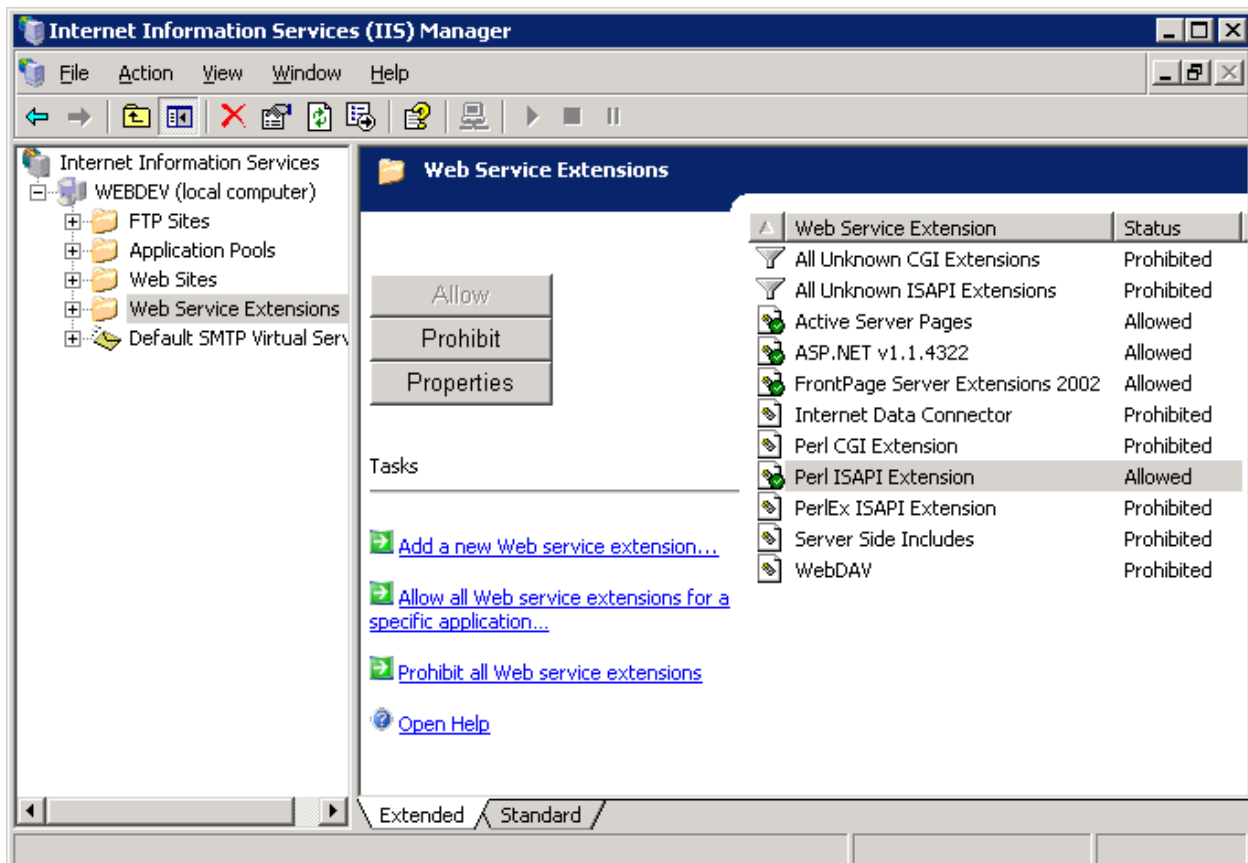
Step 5: Create the Luci Folder

In windows explorer, create a folder that will hold your luci scripts. The folder will be referenced from the web. For documentation purposes, we will create c:\inetpub\cgi-bin and use that directory as our Luci folder. Unzip the file you downloaded in Step 1 into that directory. Luci.cgi should be at the cgi-bin root. For security purposes, I recommend that you create the folder outside of the web root.

Step 6: Configure your "cgi-bin" directory in IIS

Open up your Internet Information Services manager and create a virtual directory under the root web.
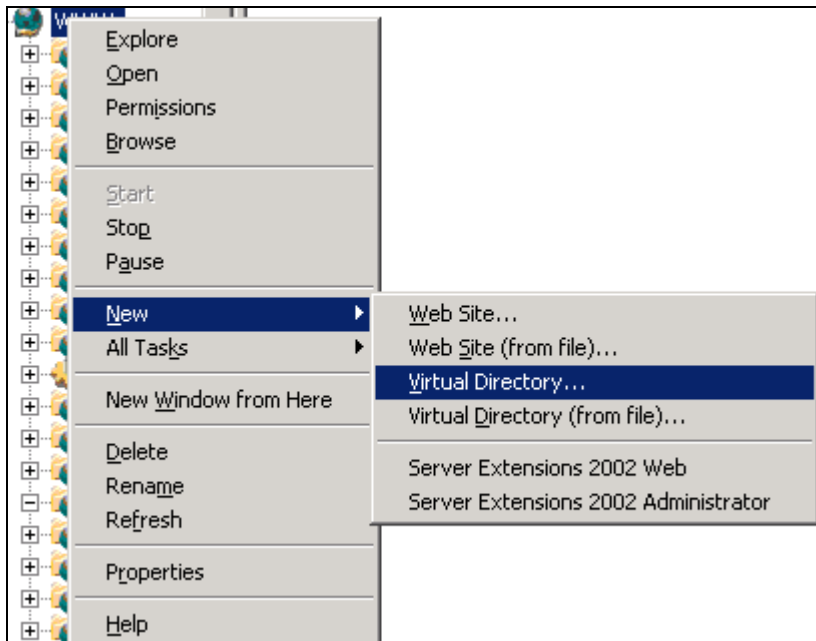
Enter the alias name. The alias will appear in the URL. For perl scripts, it is common to call the alias cgi-bin, but you can call it whatever you want. For documentation purposes, we will name the alias cgi-bin.
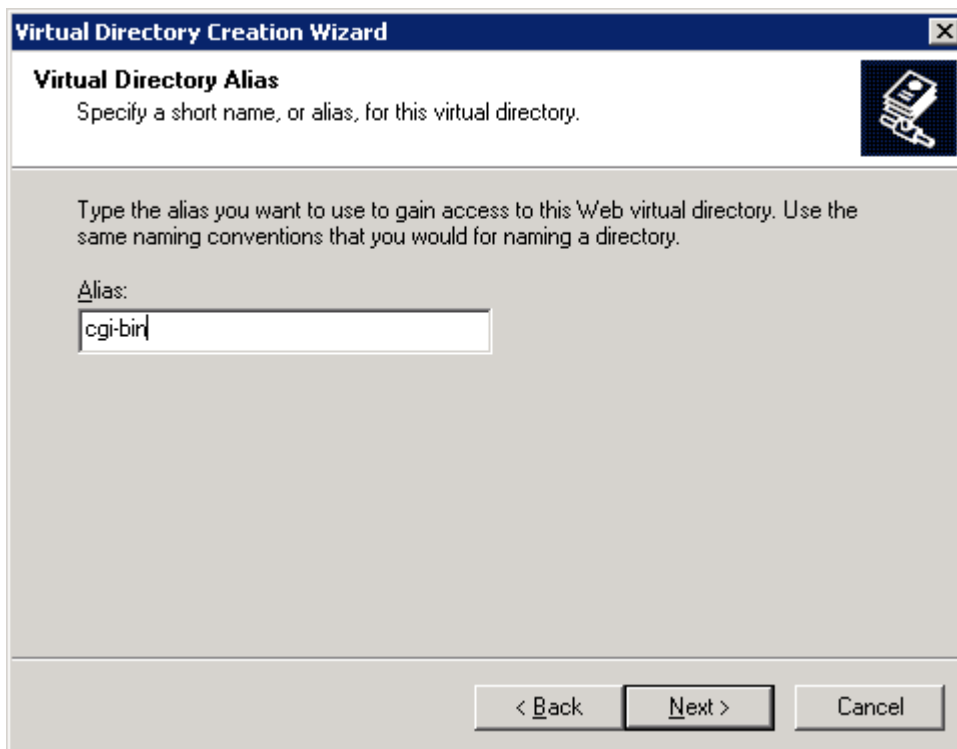
The path should point to the folder you created in step 5.
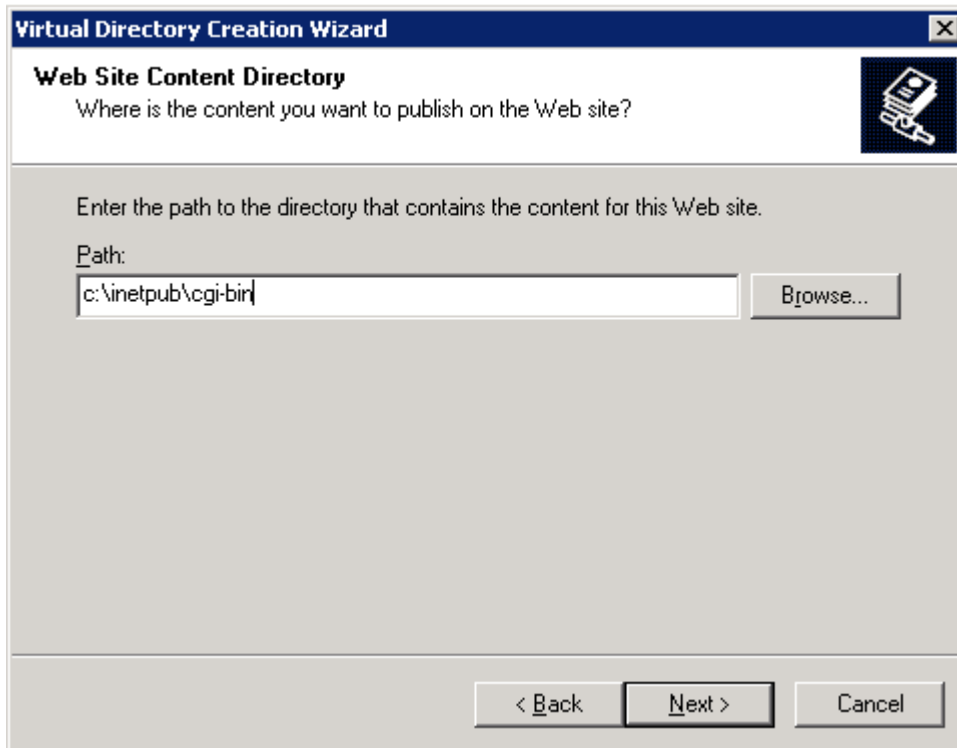
Check read and run scripts. Don't check the Execute checkbox because this is not required when using the PERLIS.DLL. Click the next button to complete the wizard.
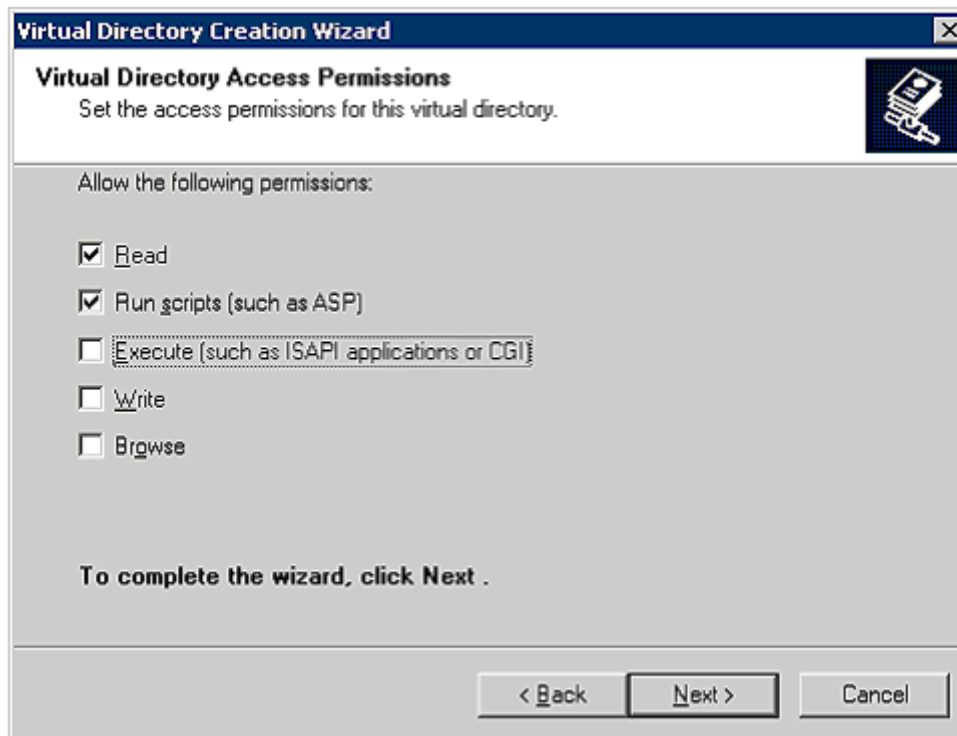
We're done with creating the virtual directory. Now it is time to configure the directory to execute the Luci scripts.

In IIS manager,
1. Right click on your cgi-bin directory

2. Under the "Virtual Directory" tab, click on the "Configuration" button
3. Under "Application Extensions", click the "Add" button
4. Type the following value in the Executable textbox:
   c:\perl\bin\perlis.dll
5. Type ".cgi" for the extension (without the quotes).
6. Press "OK"
7. Press "OK"
8. Select the "Documents" tab and click the "Add" button.
9. Type "index.cgi" without the quotes and press "OK".
10. Move index.cgi to the top by selecting index.cgi and pressing the "Move Up" button.
11. Press "OK"

Step 7: IIS Header Fix

Using the PERLIS.DLL gives IIS more control over LUCI. However, this means that IIS will send and close the HTTP Header before LUCI, so LUCI's cookie information will not be sent in the HTTP Header. It will actually appear in the browser as plain text.

This is not an NPH (non parsed header) issue because IIS isn't treating LUCI as a true CGI because of the PERLIS.DLL usage. Therefore, renaming luci.cgi to have the nph prefix (nph-luci.cgi) will have no effect on the header output of IIS.

An edit to INDEX.CGI and LUCI.CGI is required for LUCI to properly function in IIS when using the PERLIS.DLL.

Edit index.cgi

Add the following line right above the redirect statement. Look for this comment:

    # redirect to luci with the appropriate referrer

Place the following line right above that comment:

    print "Status: 302 Moved\r\n";

Edit luci.cgi

You will need to add the following three lines of code near the top of your LUCI.CGI script. We placed the code directly underneath the "use CookieManager;" statement.

print "$ENV{'SERVER_PROTOCOL'} 200 OK\n";
print "Server: $ENV{'SERVER_SOFTWARE'}\n";
print "Content-type: text/html\r\n";

Step 8: Configure Luci

Open up your windows explorer file manager and browse to your cgi-bin directory. You will need to edit some of the files. WordPad can be used to edit the files.

Edit luci.conf
The luci.conf must be edited to fit your environment. We made various changes to the luci.conf file. There are various spots in the file that require your domain. You will need to read this file

and make the appropriate changes. We would like to document the following changes to make things a little easier.

From this: app_root = /path/to/lucidir
To this: app_root = c:\inetpub\cgi-bin

From this: app_root_url = https://www.yourdomain.com/path/to/lucidir
To this: app_root_url = https://www.yourdomain.com/cgi-bin

Here is a listing of additional luci.conf variables that **will** need to be customized to fit your environment.

- default_target
- allowed_domain
- domain
- timeout (We chose 10 seconds. It's a good idea to give this a low number especially if you are using PERL.EXE.)

Edit lib/PageFetcher.pm
You need to change the initialization vector to a 16 digit integer. Please do not use the 16 digit value listed below. Type in your own 16 digit integer. It has to be 16 digits.

From this: 'iv' => '',
To this: 'iv' => '1234567891234567'

Shebang Statements
Index.cgi and Luci.cgi have shebang statements at the top of the page (#!/usr/bin/perl –T). You do not need to edit these statements if you are using PERLIS.DLL, because they will be ignored.

Step 9: Test Luci

Point your browser to https://www.yourdomain.com/cgi-bin/. You should see a text only version of the "default_target" you set up in your luci.conf file. The default target is usually your homepage.

Possible Errors

- CGI Error: 'Can't locate SomePm.pm in @INC...'
@INC cannot find the lib folder. You will have to specify the full path to the luci lib in the luci.cgi script.

ex: use lib './lib'
    change to
use lib 'c:\inetpub\wwwroot\luci\lib'

- CGI Error: 'The file "luci.conf" does not exist!'
luci.cgi cannot find luci.conf. you will need to specify the full path to the luci.conf in both index.cgi and luci.cgi

ex: use constant LUCI_CONF => 'luci.conf'
    change to
use constant LUCI_CONF => 'c:\inetpub\wwwroot\luci\luci.conf'

Placing a link on every page on your site is simple. The URL should point to https://www.yourdomain.com/cgi-bin/. Luci will use the "HTTP_REFERER" server variable to know which page to parse.

Please reference the Luci manual for additional information.
http://luci.sf.net