

Redatam Webserver



Configuration and Implementation of a web application

REDATAM© is a software developed by CELADE (Latin American and Caribbean Demographic Center), Population Division of the Economic Commission for Latin America and the Caribbean (ECLAC) of the United Nations www.cepal.org/en/topics/redatam

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I. Introduction

The purpose of this document is to serve as a quick guide for the Redatam Webserver installation, using either one of the Web Servers described here, the Apache or the Internet Information Server (IIS). The choice between them depends on the user's environment and/or his/her preferences.

This guide was designed in such a way that it is not necessary to have any previous knowledge about any of the Web Servers (Apache or IIS). The users being familiar with the Server to be used can then adjust the installation according to their needs.

Section II and Section III will describe how to download and install the Redatam Webserver application. The other sections are dedicated to each of the Web Servers (Apache or IIS), and finally the document shows how to check the application and modify it to add new Redatam databases.

II. Download Redatam Webserver

The most common way to obtain the Redatam Webserver is by downloading it from the official REDATAM web site at:

http://celade.cepal.org/cdr/setup/

On this page you will find a link to an updated version of the software in the Updates section.

Download the *Redatam Webserver_V6Rev05.exe* file to any temporary directory in your hard disk (the version number (6) and/or the revision number (05) will be changed as a new version / revision of the software becomes available).

III. Redatam Webserver Installation

Create a new folder named "Servers" on the "C:" disk (C:\Servers), and within this folder, create a new folder called "Redatam" (C:\Servers\Redatam).¹ It is important that you have read and write permissions to this disk. Please speak to your Network Administrator if you experience any problems creating the folders on your disk.

Extract the installation files by executing the *R+WebServer_V6Rev05.exe* file (double click on the filename) in the "C:\Servers\Redatam\" directory.²

The whole structure of the main installation directory will be as shown in the picture below:

¹ You can use another disk, as well as different directory names. However, be careful to change accordingly the remaining instructions in this document.

² This document can be found also in the "Docs" installation directory.



The *Redatam* directory is divided into three folders:

- a) cgibin, which should contain the Redatam databases, hence it should be the "protected" part of the installation;
- b) **Docs**, having all the documentation; and
- c) *htdocs*, the application's "visible" part, which should be recognized by the users through its "alias" *Redatam*.

IV. The Apache Web Server

This chapter is a quick guide for persons who want to use Apache and do not yet have it installed. It is not an Apache User's Guide. The whole process was designed to make installation as easy as possible, and it does not limit you from the possibility of tailoring the installation according to your preferences. There are only two steps:

- a) The installation itself (if it is not already installed); and
- b) The editing of Apache's configuration file to make the Redatam Webserver available (copy and paste two text blocks contained in this document).

IV.1 Apache Installation

Look for the Apache icon in the ToolBar at the bottom right of your screen to see if it is already installed and connected

(Passing the mouse over the icon should show "Running all Apache Services").

If the Apache server is not yet installed, go to <u>http://httpd.apache.org/</u> and download the last official version (not *Beta*). This version should be located at the "Win32 Binary (MSI Installer)" on the Apache site. For the installation process, we recommend that you choose the "Typical" installation. Accept all the default options presented by the program that is just click "Next" as each screen appears. Define a domain known to the computer such as:

DomainName = eclac.org ServerName = www.eclac.org ServerAdmin = myname.surname@eclac.org



Server Information		
Please enter your server's info	ormation.	A
Network <u>D</u> omain (e.g. somene	:t.com)	_
Server Name (e.g. www.some	net.com):	
Administrator's Email Address	(e.g. webmaster@somenet.com):
	0 programs and shortcuts for:	
Install Apache HTTP Server 2.		
Install Apache HTTP Server 2.	, as a Service Recommended.	
Install Apache HTTP Server 2, for <u>A</u> ll Users, on Port 80 C only for the Current Use	, as a Service Recommended. er, on Port 8080, when started N	lanually.
Install Apache HTTP Server 2. for <u>All</u> Users, on Port 80 only for the Current Use stallShield	I, as a Service Recommended. er, on Port 8080, when started №	tanually.

IV.2 Check the Apache installation

After being installed, the Apache server will be automatically started and be ready for use. Look for the Apache icon in the Toolbar at the bottom right of your screen to verify that is connected. Using any Internet browser, access the default Apache page by typing the below in the address window:

http://localhost/

The following page should appear on your screen:





IV.3 Configure Apache to handle the R+WebServer

Using any text editor, open the "httpd.conf" file located under the "conf" directory under the Apache installation directory (C:\Program Files\Apache Group\Apache2\conf\). You can also access this file by selecting it directly from the Apache group from the main menu:

Start>All Programs>Apache HTTP Server 2.0.50>Configure Apache Server>Edit the Apache httpd.conf Configuration File

Add the following line (exact text in red) at the end of the file

Include "c:/servers/alias/*"

Save the "httpd.conf" file.

Restart apache

IV.4 Restart Apache

Look for the Apache icon in the Toolbar at the bottom right of your screen and left click it to show the existing options. Select "Restart", to restart the server and activated the new scripts added above. Alternatively, you may go to the Start button, select Program Files, select Apache, select Control Apache Server and select Restart.



V. The IIS (Internet Information Server) Web Server

Similarly to the Apache web server installation, the IIS installation is also very simple. The difference between them is that the IIS's configuration is done through its service manager (a wizard) instead of having to edit the configuration file as in the case of Apache.

V.1 IIS Installation

In order to check if IIS is already installed, go to the Windows Control Panel, choose the *Add/Remove Programs* option, and then use the *Add/Remove Windows Components* button at the left side of the screen. The system should display the following:

 Programs and Features ← → → ↑ ○ → Control P 	anel > Programs > Programs and Fea	itures			✓ Ö Search Program	-	× م
Control Panel Home	Uninstall or change a pro	gram					
View installed updates	To uninstall a program, select it f	👿 Windows Features —	· 🗆	×			
UII	Organize 💌	Turn Windows features on or off		•			?
	Name 360 Total Security Alcor Micro Smart Card Reader Dri 0 Boost Libraries for Embarcadero D 9 Citrix online plug-in - web 2 CyberLink Power2Go 8 2 Embarcadero RAD Studio 10 Seattl 2 FileZilla Client 3.16.1 2 FileZilla Client 3.16.1 2 FileZilla Client 3.16.1 2 FileZilla Client 3.06.1 2 FileZilla Client 3.06.1 3 Foxit PhantomPDF C Google Chrome 4 Google Drive 1 HP BIO Sconfiguration Utility 9 HP Client Security Manager 1 UBO Configuration Utility	To turn a feature on, select its check box. To turn a featur check box. A filled box means that only part of the featur 	ure off, clear its ure is turned on 0) es Core Core	 200 MB 584 KB 4.99 GB 159 MB 4.99 GB 21.7 MB 1.16 GB 316 MB 68.2 MB 4.00 MB 15.7 MB 66.1 MB 66.1 MB 66.1 MB 	Version 8.2.0.1120 1.7.39.0 17.0 12.3.0.8 8.0.3.5229 Embarcadero InterB 17.0 3.16.1 6.0.25.1029 49.0.2623.110 1.28.1549.1322 6.0.28.1 4.0.15.1 8.3.17.2042 9.6.2 fr		~
	HP Drive Encryption	Hewlett-Packard Company HP	3/18/2016 3/18/2016	3.43 MB 3.43 MB	8.0.23.40 1.1.1 1.1.1		
	HP Hotkey Support HP SoftPaq Download Manager	HP	3/18/2016 3/18/2016	33.4 MB 81.2 MB	6.2.17.1 4.2.4.0		Ļ
	Currently installed pro 70 programs installed	ograms Total size: 18.2 GB					

If the IIS server is already installed the system will display a check mark at the *Application Server* line, as above. If not, select the check box and this will then allow you to proceed with the installation process. Again, it is recommended that you accept the default options presented by the program. During the installation process you will be required to insert the original Windows Operating System Installation CD to complete the process.

V.2 Check IIS Installation

Using any Internet browser of your choice, access the server's default page by typing the below in the address bar: http://localhost/

If this is the first time you have installed IIS, then the system should display the below screen: Either for Windows XP or Windows 10





V.3 Activate IIS Components

To activate the IIS components you have to use the *Internet Information Server Manager*, which is found through the *Windows Control Panel*, then *Administrative Tools*, and then *Internet Information Server Manager*. Add the components shown in the figure and the CGI application:

💽 Windows Features	_		×
Turn Windows features on or off			?
To turn a feature on, select its check box. To turn check box. A filled box means that only part of th	a feature (e feature i	off, clear is turned	its on.
🖃 🔳 🚽 World Wide Web Services			^
Application Development Feature	ires		
Common HTTP Features			
🖂 📊 Default Document			
Directory Browsing			
HTTP Errors			
HTTP Redirection			
Static Content			
WebDAV Publishing			
🕀 🗔 📙 Health and Diagnostics			
🕀 🗌 📴 Performance Features			
			¥
	ОК	Can	cel





Also, add the IIS console to manage IIS configuration through this console:

🖾 Windows Features - 🗆	×
Turn Windows features on or off	?
To turn a feature on, select its check box. To turn a feature off, clear i check box. A filled box means that only part of the feature is turned o	ts on.
🖃 🔳 📊 Internet Information Services	^
🕀 🔄 🚽 FTP Server	
🖃 🔳 📊 Web Management Tools	
🗉 🗌 📙 IIS 6 Management Compatibility	
IIS Management Console	
IIS Management Scripts and Tools	
IIS Management Service	
🗉 🔳 🔄 World Wide Web Services	
Internet Information Services Hostable Web Core	
Isolated User Mode	
🕀 🔲 📊 Legacy Components	
💷 🔽 Media Features	~
OK Cano	:el





Using the Console enable the CGI restrictions to allow unspecified CGI modules:

🕲 Internet Information Services (IIS) Manager	- 0	ISAPI	and CGI Re	estrictions	Alerts
Connections Connections Mill UES (IA28 Resident) Application Pools > Default Wes See Image: Second Pools > Default Wes See Mathematic Configuration Configuration </td <td>Actions Open Feature Manage Scorer © Restant B Start</td> <td>Use this feature to Group by: No G Description</td> <td>specify the ISAPI rouping • Restriction</td> <td>I and CGI extensions that can run on the Web server. Path Edit ISAPI and CGI Restrictions Settings Allow unspecified CGI modules Allow unspecified ISAPI modules OK</td> <td> The ISAPI extensions is not installed. You is pecify ISAPI extensions are allowed to run, by will not be able to ru the ISAPI extensions is installed. Actions Add Edit Feature Settings. Help </td>	Actions Open Feature Manage Scorer © Restant B Start	Use this feature to Group by: No G Description	specify the ISAPI rouping • Restriction	I and CGI extensions that can run on the Web server. Path Edit ISAPI and CGI Restrictions Settings Allow unspecified CGI modules Allow unspecified ISAPI modules OK	 The ISAPI extensions is not installed. You is pecify ISAPI extensions are allowed to run, by will not be able to ru the ISAPI extensions is installed. Actions Add Edit Feature Settings. Help
Ready					

V.4 Redatam Virtual Directory

In the IIS Manager, to create a new virtual directory, right click on *Default Web Site*, and then choose *New* and *Virtual Directory*. The system will start a Wizard to receive some parameters, the first one being the Virtual Directory Alias, which should be *redatam* (this word is case sensitive). Browse to find the "*htdocs*" directory, located where the Redatam Webserver installation files were extracted, for example: "C:\servers\redatam\htdocs":



Connections			Q De	fault Wel	o Site Hoi	ne				
LAZB (LAZB)	Red	datam)	Filter:		- 🛒 Go - 🕻	Show All	Group by: Are	ea	-	
V G Sites	on	POOIS	IIS —							^
🗸 😌 De		Explore		CGI			404	1		
		Edit Permissio	ons	CGI	Default	Directory	Error Pages	Handler	HTTP	
6	•	Add Applicati	ion	-	Document	Browsing	_	Mappings	Respon	
	1	Add Virtual D	irectory		- 🔍	A				
		Edit Bindings.		Modules	Output	SSL Settings	WebDAV			
		Manage Web	site 🕨		Caching		Authori			
	2	Refresh		ht						^
>	<	Remove								
		Rename		1						
	1	Switch to Cor	ntent View							

Add virtual directory "redatam" - public

Add Virtual Directory ?	Edit Permissions
Site name: Default Web Site	Edit Site Bindings
Path: /	Browse For Folder X
Alias: redatam	Select a directory for the application.
Example: images	servers ^
Physical path:	✓ 📴 redatam
	> htdocs > redbin

Add virtual directory "redbin" - private

Add Virtual Directory	×	Edit Permissions	📄 Handle	r Mappings				Actions Add Managed Handler
		Edit Site Bindings	Use this feature to sp specific request type	ecify the resources, such as DLLs and managed 5.	code, that	nandle respor	nses for	Add Script Map Add Wildcard Script Map
Site name: Default Web Site	Browse For Folder		Group by: State	•		_		Edit Feature Dermissions
Path: /			Name	Edit Feature Permissions	×	Туре	Handle	Revert To Parent
Alias:	Select a directory for t	the application.	Enabled OPTIONSVerbHand	Permissions:		ecified	Protoco	View Ordered List
redhin			TRACEVerbHandler	Read		pecified	Protoco	W нер
Formula income	v serve	rs A	StaticFile CGI-exe	Script		or Folder	StaticFi CgiMo	
Example: Images	v re	edatam		✓ Execute				
Physical path:	>	htdocs redbin		OK Ca	ncel			

Click *Next* to finish the process, and then, using any Internet browser of your choice, access the Redatam page by typing the below in the address bar:

http://localhost/redatam

If you followed all the previous steps exactly, then the below screen should be displayed:





V.5 Check the application web server installation

- After clicking the screen:
- On-Line Process
- button the system should display the following





The message tells you that there is no TEMPO directory but one will be created.

Where R edatam Webserver application is running and will proceed to create a "Tempo" directory required to store temporary Redatam files. It is important that this folder is created by the application and not copied or created on the outside by the user. In the case of reinstatement of Redatam Webserver or a new versions of Web Server, we recommend that the "tempo" folder is removed previously.

Refresh the page and now the list of databases available should be listed:

🖉 🛞 Nuevo - situacion actus 🗴 🚺 (1) Facebook 🛛 🔹 🔷 Redatam::CELADE, ECL/ 🛪 🏷 Redatam::CELADE, ECL/ 🛪 💭	
← → C	☆ =
UNECLAC / CELADE REDATAM On-Line Process	
▼New /⁄liranda	
xPlan Style	
Redatam ⁷ Fast & Friendly	
WebMaster <u>redatam@cepat.org</u> © 2014 Latin American and Caribbean Demographic Center (CELADE), Population Division of the Economic Commission for Latin America and the Caribbean (ECLAC), United N Telephone: (56-2) 2210 2021; Fax: (56-2) 2208 0196 - P.O. Box 179 D Santiago, Chile Powered by <u>REDATAM</u> ®	ations

VI. Using other databases with the REDATAM server

Before you arrange the site structure for another database it is important that you understands the file structure of the site. Be aware that there are two branches that exist under the root directory **servers/Redatam**, as it is shown in the figure (cgbin and htdocs):

🖃 🚞 Servers
🖃 🚞 Redatam
🗄 🚞 🕞
Docs
E Cottoos



These two branches are related, they keep all the files that are necessary to run the Redatam Web application. The first branch under **servers/Redatam** is **cgibin**, and it is private. It is used to keep protected files and directories (databases, images, maps, inl files, etc.) required for the Web application; the second branch is **htdocs** is used to keep all public files and documents (help files, images, etc. in general, all files referenced by the html files executed in internet). For each application that you create you should create also a private and a public subdirectory (you can use the same name) under these branches.

Under the private *cgibin* branch you should have created the *Rpbases* folder and under this subdirectory you should create a folder with the new database Web Application. Then, under the database Web application create these three subdirectories:

/base (for files .dic, .rbf, .ptr) /work (for command sets) /nodes (for specific thematic nodes) /set (for default parameters) /sel (for selection files) /map (for maps configuration files)

Under the public *htdocs* branch you should have created a subdirectory with the same name of the database Web Application. In this folder locate all public files and images referenced by the html files of the application.

New Miranda example:

The database and inl files are located under *cgibin/Rpbases/NMIR* and those images references in the html files (*RpOutput_ESP.htm*) in addition to the help files are located under *htdocs/NMIR*.



The next step is to update the inl file that controls the Redatam site main Webservermain.inl located in \Redatam\cgibin.

Create your own application.

Now open the file Webservermain.inl with a text editor of your choice and enter the section STRUCTURE and then find the NODES section where the new applications or databases are listed as shown in the figure the entry for New Miranda, you will create a new entry:





In this case we will add a node called MIPROYECTO as seen in the picture below.



Then create a new section with the same name. In this section you declare what type of applications and where is located. Also designate the main inl file of this application such as the guest.inl file:

[MIPROYECTO]

CAPTION=Mi Proyecto INL=RpBases\MiProyecto\NombreProyecto.inl PAGETYPE=BASE

Verify that your application is stored in the private part of the Redatam Server





Folders that should be created:

/Base (for the files .dic, .rbf, y .ptr)

/Maps (for selection files with the extensions -.slw, .sel-, and maps - .mxp, .shp, .shx, .dbf) /Site (for images .jpg, .gif and html corresponding to the base or new adjusted templates of RpSite)

The "visible" part of the application, ie public files, htm files, images, PDF files or other-should be located in the C: \ servers \ redatam \ htdocs. Under this directory you should insert directories for each project as in the case of the private cgibin folder, it is suggested to arrange the information in subdirectories, as in the example servers / Redatam / htdocs / MiProyecto.



In summary, for the sample application, we stores all the database and pages. Inl under servers / Redatam / cgibin / Rpbases / MyProject and all the images and docs, Htm and help files under servers / Redatam / htdocs / MyProject.





Now, you are ready to create the *Guest.inl* file under the database application folder. Edit this file adding all the parameters as they are in the New Miranda example, starting from the STRUCTURE section:

[STRUCTURE] MODE=APPLICATION ALLOWRESTART=YES PLANID=NMir Census CAPTION=R+SP webPlan Census Application

DATASETS=1

SELSET=SELSET1 LASTSELECTION=1

Then, identify all the files that hold other information used by the application and included in the guest.inl file:

#include Preferences_ENG.inl
#include DataSels_ENG.inl
#include Panels_ENG.inl
#include Styles_ENG.inl
#include GeneralSections_ENG.inl
#include Defines_ENG.inl
#include Maps_ENG.inl
#include Utilities_ENG.inl

Now you are ready to try your application. Open the internet explorer window and write

http://localhost/redatam

