

# **FOLKWEB SERVER**

## **User Guide**

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## **1.Installation**

### **What is Web server**

A Web server is a program running on the computer that is set up to serve documents to other computers that send HTTP/1.0 requests for documents. Because the server only operates when a document is requested, it's an efficient way to share documents because it requires only a small amount of server's resources.

The language Web servers and clients use to communicate with each other is called the HyperText Transmission protocol (HTTP). All Web clients and servers must be able to speak HTTP in order to send and receive hypermedia documents. HTTP is an application-level protocol with the lightness and speed necessary for distributive, collaborative hypermedia information systems. It is a generic, stateless, object-oriented protocol which can be used for many tasks, such as name servers and distributed object management systems, through extension of its request methods (commands). A feature of HTTP is the typing and negotiation of data representation, allowing systems to be build independently of the data being transferred.

### **What is Folkweb server**

Folkweb server is a full - featured HTTP 1.0 protocol based Internet server designed to take advantage in using Windows-95 and Windows NT multithreading, ODBC, CGI 1.1 for Windows.

Like the other servers Folkweb server offers the features you need:

- o Win32 multithreading where each connection served by a dedicated thread.
- o Supports GET, HEAD and POST request methods.
- o Supports content negotiation.
- o Supports Windows NT 3.5 or Windows 95.
- o HTTP 1.0 protocol compliant.
- o Uses built-in image-map support, you need only to create NCSA compatible map file.
- o Uses built-in database connectivity, now you can publish and update your databases.
- o Supports access authentication by users and groups.
- o Supports IP address filtering.
- o Supports built-in and configured URLs.
- o Supports document to URL redirection.
- o Supports CGI/1.1 protocol.
- o Supports Windows CGI/1.1 protocol.
- o Uses GUI based control application for server settings with on-line help.
- o Supports URL to Path mapping (aliasing).
- o Supports Extension to MIME type mapping.
- o Access Logging.
- o Error Logging.
- o Automatic Back-Up Logging.
- o Changing settings without reloading the server.
- o Customized Directory Listing.
- o Customized DB search reports.
- o Access Authentication by users or groups
- o Can change access realms without restarting server.
- o Supports IP filtering by IP Addresses and Address ranges.
- o Uses built-in Directory listing with image and header extensions.

## Requirements

Before you begin the installation, please confirm that your system meets the following minimum requirements:

- o An IBM personal computer or 100 compatible with Intel or compatible I486 or higher CPU and 8 - 16 megabytes of memory capable of running Windows-95 and/ or Windows NT 3.1 or higher.
- o 3 MB of free disk space.
- o Microsoft Windows-95 and/or Windows NT 3.1 or higher TCP/IP drivers, installed in your OS.
- o A VGA graphic adapter and monitor are required.
- o A mouse or other pointing device supported by Windows.

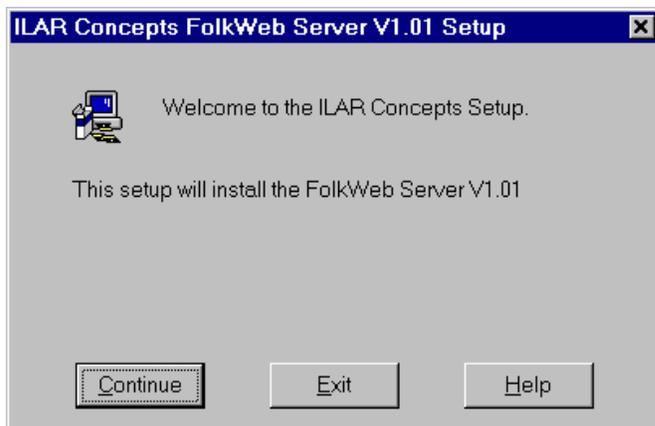
## Skills you need

We assume that you already have some familiarity with the Windows interface, and that you are comfortable using the mouse to select commands and options. We also assume a knowledge of Internet, TCP/IP protocol and HTML Language.

## Installing Folkweb server

Installation of FolkWeb server is quite simple.  
Using File Manager run SETUP.EXE

The first dialog you will see is:



Click the **Continue** button if you wish to keep going , **Exit** button to quit installation or **Help** button for on-line help.

Next you will be prompted for your server network name....

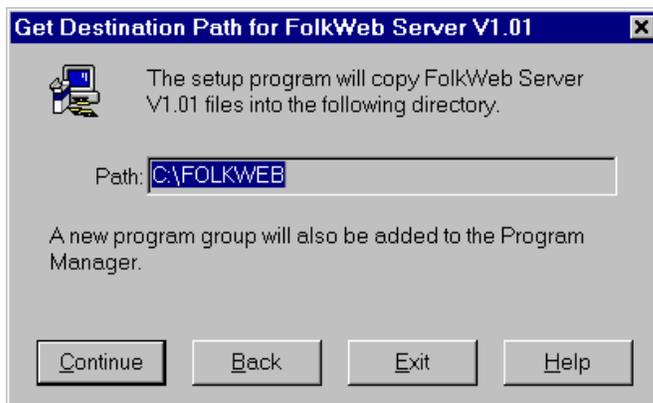


and E-Mail address



You should enter your real DNS name and your e-mail address.

Click the Continue button to get the next dialog:



Enter the path for FolkWeb. At this point you can return back and change your server network name and E-Mail address by clicking on **Back** button.

If you choose Continue FolkWeb server will be installed and a new program group will be created.

Along with Folkweb server installation Setup will install ODBC Set, Microsoft Access ODBC driver and sample MS Access database registered as Data Source with ODBC administrator under **IlarDtb** name.

## **2.Using Folkweb Server**

### **Built-in ODBC supported Database**

One of the features of Folkweb server is its built-in database connectivity that allows publishing your database on the WWW. You can publish any database that is ODBC compliant and registered as Data Source with ODBC Administrator. You can also add new records to your database.

It is really easy to publish your existing or new databases on World Wide Web using FolkWeb Server built-in Database Connectivity.

If you are familiar with creating HTML 2.0 forms you will not find hard to understand following steps:

1. If you have not installed ODBC 2.0 software and drivers FolkWeb Setup will do it for you. Database that you want to publish should be registered with ODBC administrator.  
To register database
  - Start Database Administrator under Control Panel.
  - Use "Add" button to add new data source. Choose ODBC driver and click "OK" button.
  - Give Data Source Name for your database and choose database using "Select" button in "Database" frame. Click "OK" button. Your database should be referred in HTML form by Data Source Name under which your database is registered.

FolkWeb Setup will register a sample Database ilar.mdb with ODBC administrator under **IlarDtb** name.

2. You should use **POST** method for publishing DBs. In **Action** for HTML form you should enter the name under which you registered your database as Data Source and append it with dot and **dbc** extension. If you wish to offer "Add" capabilities to your database

you should enter the name under which you registered your database as Data Source and append it with dot and **dbc** extension followed by **"/add"**.(See access.htm sample)

For example, you have database file **my.dbc** and you registered it as **MyDb**. So in Action for "search" you should enter **MyDb.dbc** and Action for "Add" you should enter **MyDb.dbc/add**

3. All fields you wish to publish should be prepended with table names and dots. Do not confuse field **Name** with field **Caption**.

For example for table "**MailingList**" and field name "**firstname**" your INPUT NAME title in HTML form should be "**MailingList.firstname**". Fields names are not case-sensitive.

4. For "search" user can specify selection criteria by typing whole or partial keywords and using logical operators **AND , OR ,">" , "<" or ">=" and "<="** signs between keywords. To see all the table entrances user should type '\*' in any of the fields.

As a result of **POST** request for "search" user will receive table or ordered list with entrances that are correspond to the selection criteria provided by user . Result table will show only those columns that user exposed in HTML form as selection criteria.

5. If you wish to offer user to add records to your database, be careful in choosing which fields should appear in your form. You should not consider exposing fields like "primary key" or "counter" unless you are sure that user will enter "unique" data.

6. You can create customized database "search" and "add" reports by modifying the following predefined files:

- DBTOP.TXT - in this file you can put text that will appear before " search" result table in the output form
- DBBOTTOM.TXT - in this file you can put text that will appear after " search" result table in the output form
- DBHEAD.TXT - in this file you can put HTML background color tag for result in the output form
- DBADD.TXT - in this file you can put text that will appear as "add" result in the output form

All these files should reside in the same directory as your database file. If you wish to have different messages for different databases put them in different directories and create separate set of files in that directories with file names listed above. You should not give any references to these files in your HTML forms for database publishing.

See access.htm file in ..\folkweb\pages directory for an example of HTML form.

## **Built-in Image Mapping**

No matter how impressive your message, people respond to images. The reader's eye is naturally drawn to a picture before the text and the quality of the images you use will largely determine whether someone will take time to read your Web page or pass it by.

Because of the importance of the images in WWW publishing, the Folkweb server supports image mapping. All you need to do is to create an image in GIF or JPEG format and it's NCSA compatible image map file.

## **CGI Interface**

The Common Gateway Interface ( CGI ) is a standard for external gateway programs to interface with HTTP Servers. It is a very flexible way to process data sent from Web browser and passed through the server.

FolkWeb supports CGI/1.1 and Windows CGI/1.1 interface. Folkweb comes with a sample written in C++ using MFC library.

FolkWeb does not force you to put CGI applications into predefined directories. You can put CGI/1.1 and Windows CGI/1.1 applications in any directory. FolkWeb will automatically detect which application is CGI/1.1 and which is Windows CGI/1.1(1.2).

## **Directory Listing**

To list a directory you should enter URL without any resource or document and remove default document from this Path. FolkWeb will automatically browse requested directory and display Header if you put Header.txt file into listed directory. If you want to prevent the directory from being listed you should put the document with the default resource name into protected path.

You can customize your directory listing by adding background images, colors and logos.

There are two predefined text files you should use to this:

DIRHEAD.TXT - use this file to add background image or to change background color.

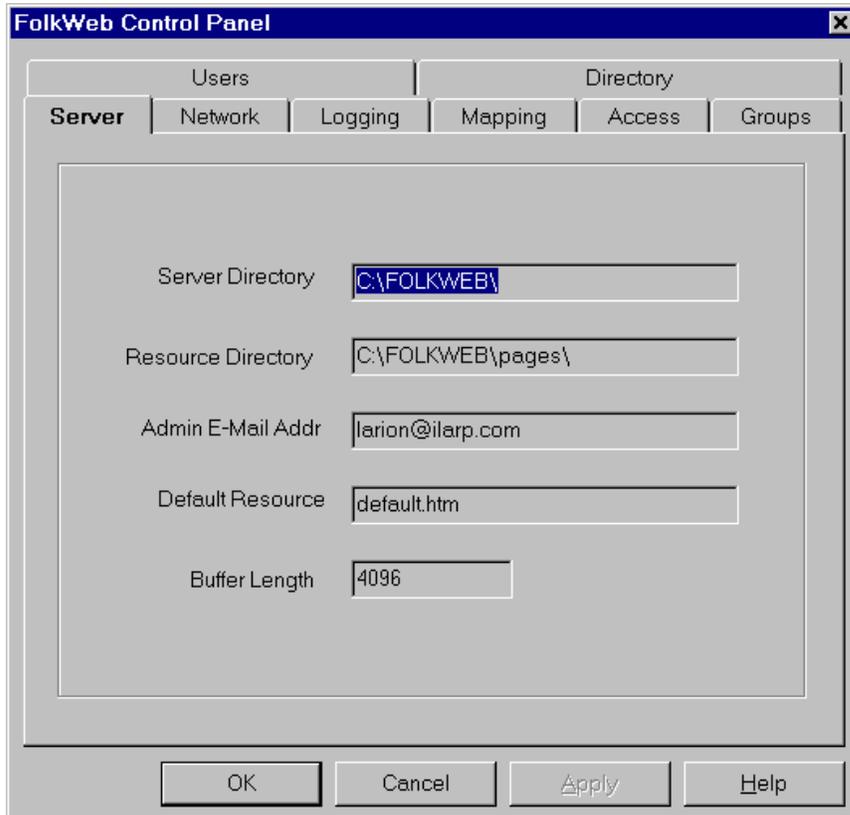
DIRNOTE.TXT - use this file to add a logo or text (html) notes.

## Using Folkweb Control Panel

FolkWeb Control Panel is a tool to maintain FolkWeb server. It allows you to change settings of the following 8 categories: Server, Network, Logging, Mapping, Access, Groups, Users, Directory

### Server Page

Allows to change Server and resource directories, Administrator E-Mail address, default resource and Buffer length



#### 1. Server Directory.

Sets the root working directory of the server.

#### 2. Resource Directory.

Sets the document (resources) root directory. It will be substituted by slash mark and any subdirectory will be relative to this root.

*Example: If you physical root is "c:\folkweb\pages\" and you have subdirectory "mydir" created off root, in URL terms it will look like <http://yourdomain.com/mydir/doc.htm>. You can hide your physical tree by using URLs aliases. (See Mapping Page Help.)*

#### 3. Admin E-Mail Addr.

Sets Server Administrator E-Mail address.

*Example: [webmaster@mydomain.com](mailto:webmaster@mydomain.com)*

**4. Default Resource.**

Sets the default document which will be sent to user-agent.

Example: *If client uses only URL without document name, server will append it with default document.*

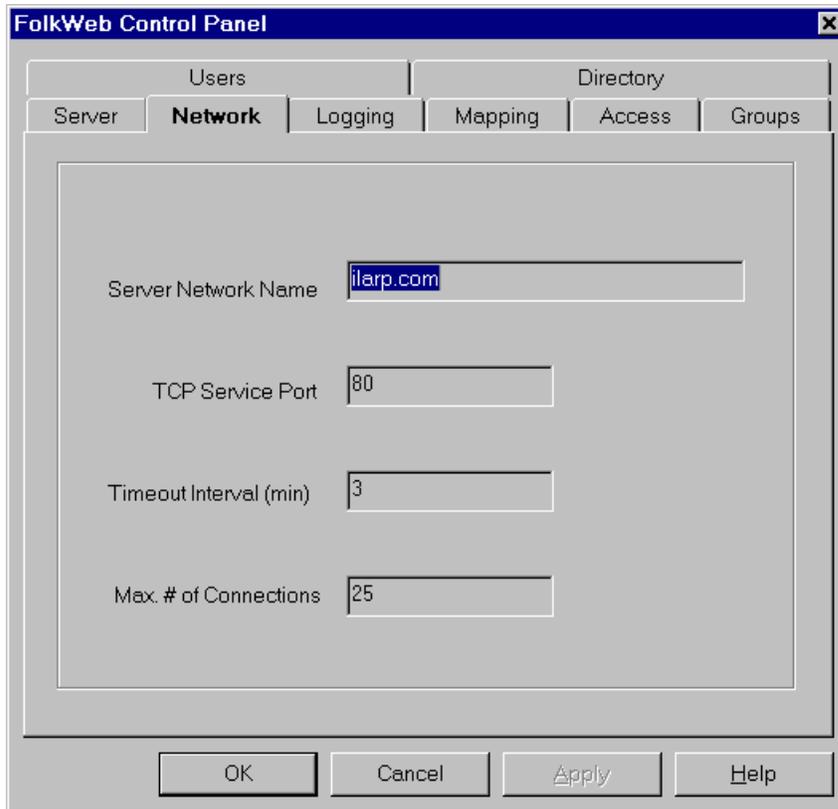
**5. Buffer Length.**

Sets the size of the buffer used to send requested document.

By default it is set to the optimal 4096 bytes.

## Network Page

Allows to change Server network name, TCP service Port and Timeout interval



The screenshot shows a window titled "FolkWeb Control Panel" with a close button (X) in the top right corner. The window contains a tabbed interface with two main sections: "Users" and "Directory". Under "Users", there are tabs for "Server", "Network", "Logging", "Mapping", "Access", and "Groups". The "Network" tab is currently selected. The main content area contains four configuration fields, each with a text input box:

- Server Network Name:
- TCP Service Port:
- Timeout Interval (min):
- Max. # of Connections:

At the bottom of the window, there are four buttons: "OK", "Cancel", "Apply", and "Help".

### 1. Server Network Name.

Sets the DNS server name. It must be the registered DNS name.

### 2. TCP Service Port.

Sets the port on which Server will listen to the network.  
By default it is set to 80.

### 3. Timeout Interval.

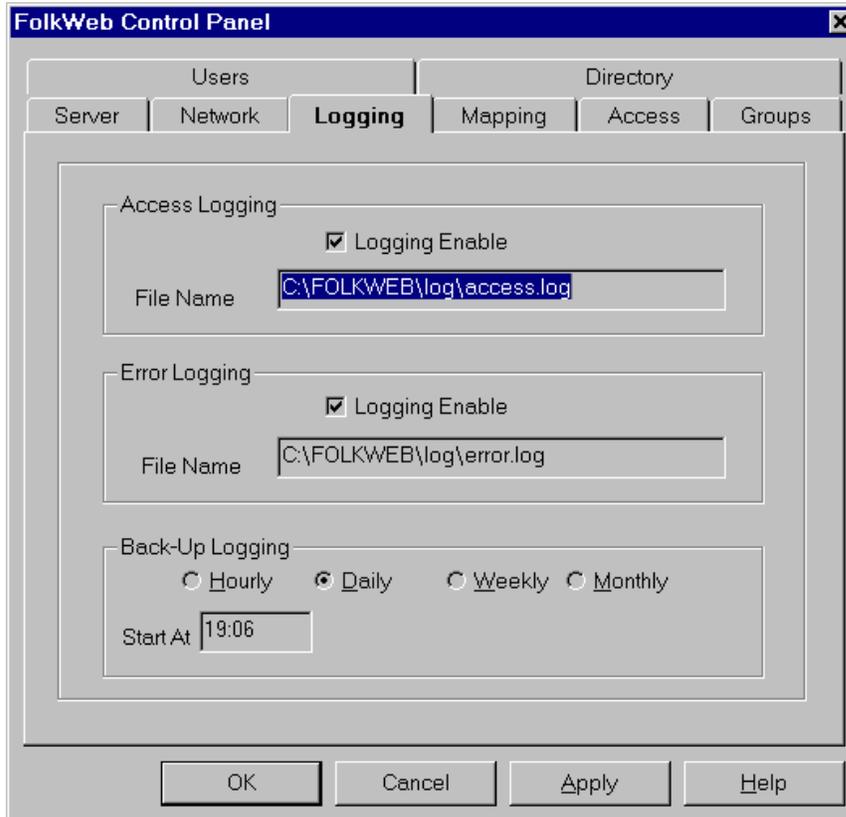
Sets the idle time-out interval. If for some reasons the connection is idle for the time longer than time-out interval, the connection will be closed.

### 4. Maximum # of Connections.

Sets the maximum number of allowed client connections. By default it is 25. If you want to increase this number you have to increase your virtual memory in ControlPanel->System->VirtualMemory applet. Currently Windows Sockets 1.1 allows maximum number of 255 connections.

## Logging Page

Sets names for access and errors log files.



The screenshot shows the 'FolkWeb Control Panel' window with the 'Logging' tab selected. The window has a title bar with a close button. Below the title bar are two main sections: 'Users' and 'Directory'. Under 'Users', there are tabs for 'Server', 'Network', 'Logging', 'Mapping', 'Access', and 'Groups'. The 'Logging' tab is active. The 'Logging' section contains three sub-sections: 'Access Logging', 'Error Logging', and 'Back-Up Logging'. 'Access Logging' has a checked 'Logging Enable' checkbox and a 'File Name' field containing 'C:\FOLKWEB\log\access.log'. 'Error Logging' has a checked 'Logging Enable' checkbox and a 'File Name' field containing 'C:\FOLKWEB\log\error.log'. 'Back-Up Logging' has radio buttons for 'Hourly', 'Daily' (selected), 'Weekly', and 'Monthly', and a 'Start At' field containing '19:06'. At the bottom of the window are four buttons: 'OK', 'Cancel', 'Apply', and 'Help'.

### 1. Access Logging.

Sets the path and the file name to which all transactions will be logged.  
You can disable this feature.

### 2. Error Logging.

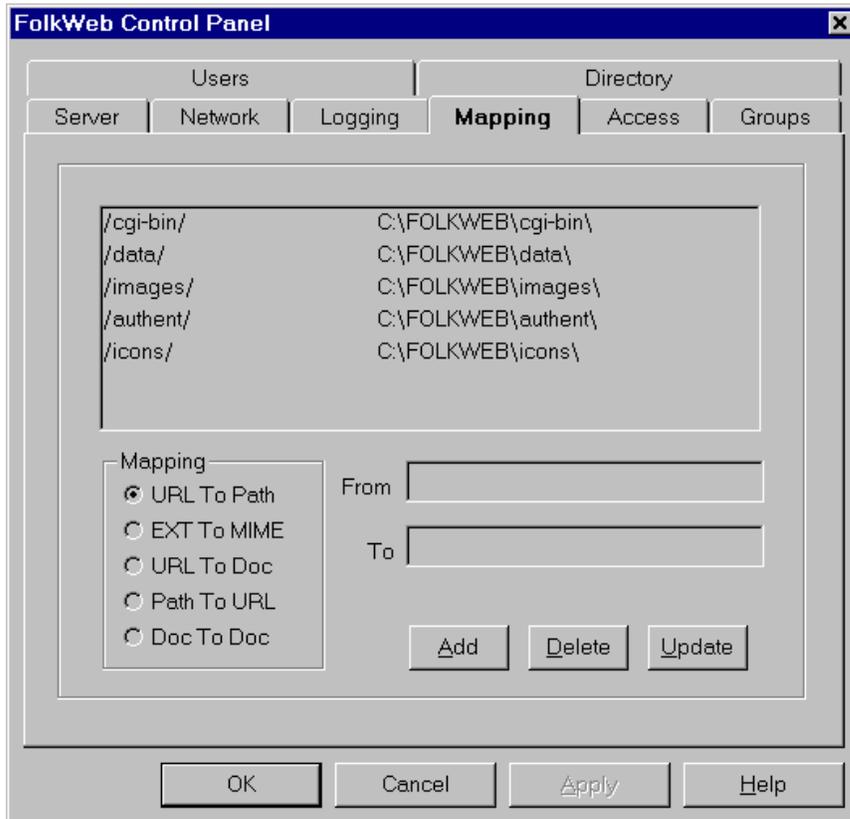
Sets the path and the file name to which all errors will be logged.  
You can disable this feature.

### 3. Back-Up Logging.

Sets the time when access.log and error.log would be backed-up into time-stamped files.

## Mapping Page

Allows mapping and URL Aliasing



### 1. URL To Path Mapping (URL Aliases).

Use this mapping if you want to hide the real location of your resources or your resources are located in the directories which are not siblings of the root directory.

Examples: *Assume you want to publish the document located on CD-ROM which logical drive name is D:. You can map /mydocs/ to d:\...*

### 2. Ext To MIME Mapping.

Server uses this map table to define which MIME types are accepted by the client and what MIME type is requested by the client. Use this mapping to add new Documents type. You can have only one instance of each extension but you can map different extensions to the same MIME type.

### 3. URL To Doc (Predefined and Configured URLs)

You can map URLs beginning with tilde mark '~' to physical file name. That will free your users from typing in long URL names.

Example: *You can map /~stats to c:\folkweb\log\access.log file. Now you can type in http://yourdomain.com/~stats.*

### 4. Path To URL (URL Redirection)

Use this mapping to redirect client requests to different servers. You can use this feature if some documents moved to different server or you need to conduct scheduled directory maintenance.

### 5. Doc To Doc (Content Negotiation)

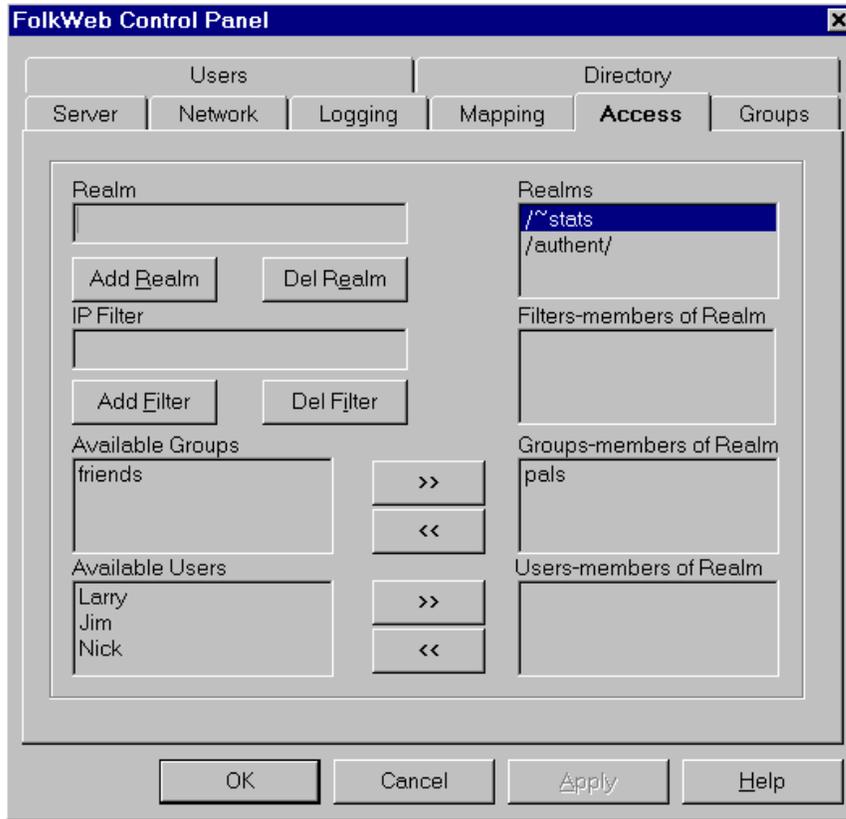
Use this mapping if you want to provide alternative document types to clients whose browsers do not accept certain types of documents.

Example: *Assume some clients' browsers do not accept GIF images but allow BMPs. You can map blueball.gif to blueball.bmp.*

**Attention: All Mapped Documents must reside in the same directory.**

## Access Page

Here you can add new realms, set Access Authentication by users and groups, or prohibit access by IP filtering.



### 1. Adding new Realms.

Use "Realm" edit control to add new Realms to Realms List. All documents can be authenticated based on the realm to which they belong. Realm is a virtual path where your document might be found. Realm can be any URL supported by this server (URL, alias URL, predefined URL)

### 2. Access Authentication by Users.

To add new users to a certain realm:

- Select a realm by clicking on any line in "Realms" list
- Select all users you want to add to a realm from "Available Users" List
- Click the ">>" button.

To remove users from realm:

- Select a realm
- Select users you want to remove in "Users-members of Realm" List
- Click the "<<" button

**Attention: To create new users see "Users Page Help"**

### 3. Access Authentication by Groups.

Adding and removing groups to and from realm is similar to adding and removing users.

### 4. Prohibiting access by IP Filtering.

To add IP Filter:

- Select a realm

- Enter new IP filter (you can enter any number of quads)
- Or enter the range of IP addresses delimited by dash and without spaces (134-234)
- Click the “Add” button

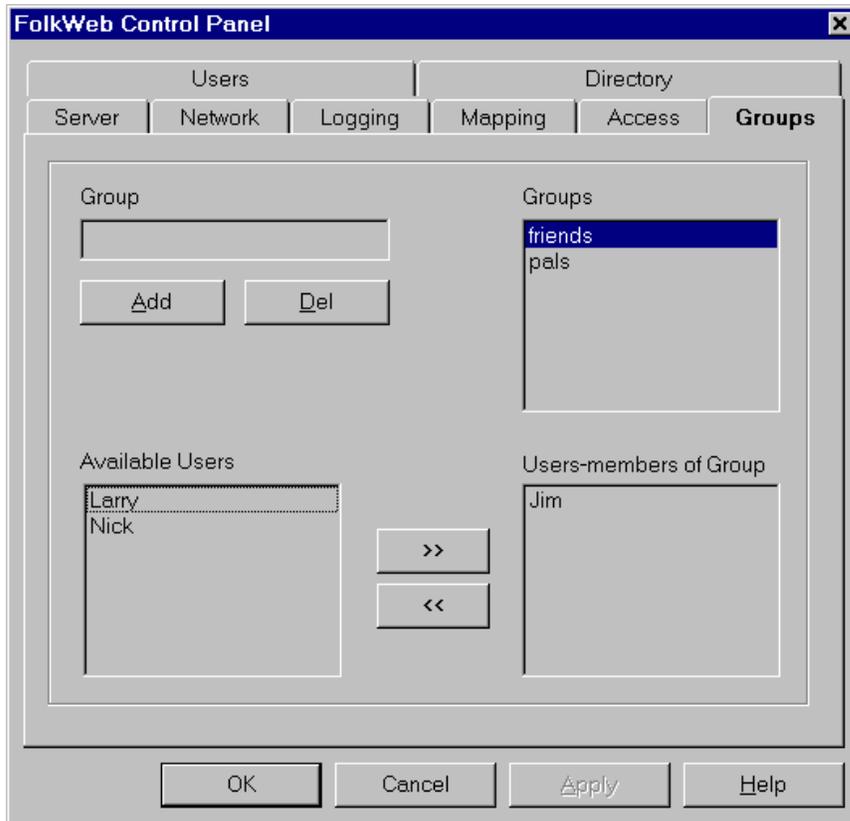
To remove IP Filter:

- Select a realm
- Select the IP Filter from “IPFilters-members of Realm” List
- Click the “Del” button

Example: *144.100 filter will bar all clients whose IP Addresses begin with 144.100.\*.\**

## Groups Page

Allows to create new groups and remove existing group from the group list, also add or remove users from the group.



### 1. Creating new Group.

To create new group:

- Enter group name into the group edit control
- Click the "Add" button

### 2. Removing group from the Groups List.

To delete group:

- Select a group on the Groups List
- Click the "Del" button

### 3. Adding users to a group.

To add users to a group:

- Select a group from the "Groups List"
- Select users on the "Available Users" list
- Click the ">>" button

### 4. Removing users form a group.

To remove users from a group:

- Select a group from the "Groups List"
- Select users from the "Users-members of the Group" list
- Click the "<<" button

## Users Page

Gives possibility to add user to the users list and remove user from users list

The screenshot shows a web-based control panel window titled "FolkWeb Control Panel". The window has a menu bar with options: Server, Network, Logging, Mapping, Access, and Groups. Below the menu bar, there are two tabs: "Users" (which is active) and "Directory". The "Users" tab contains a form with three input fields labeled "User", "Password", and "Confirm Password". Below these fields are two buttons: "Add" and "Del". To the right of the form is a list box titled "Users" containing the names "Larry", "Jim", and "Nick". At the bottom of the window, there are four buttons: "OK", "Cancel", "Apply", and "Help".

### 1. Adding new User.

To add new User to the Users List:

- Enter User name into user edit control
- Enter User's password and confirm it
- Click the "Add" button

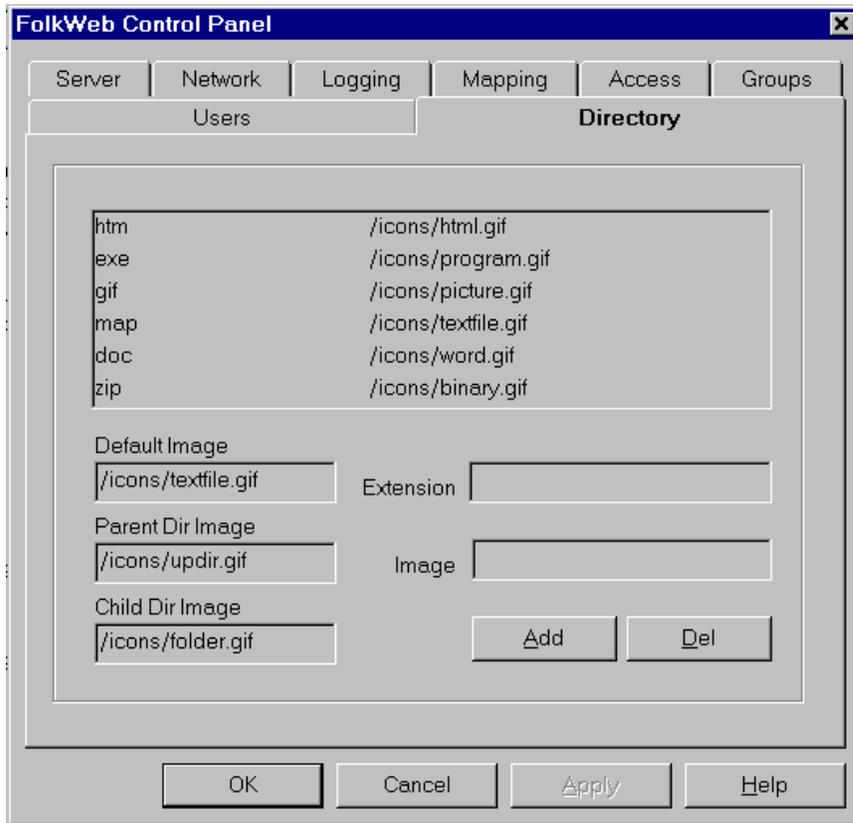
### 2. Removing User from the Users List.

To delete user from the Users List:

- Select a user from the Users List
- Click the "Del" button

## Directory Listing Page

Allows to map image to extension, set default image and also parent directory and child directory images.



### 1. Mapping Image to Extension

To add new mapping to the Extension-to-Image list:

- Enter new extension into Extension edit control
- Enter image URL into Image edit control
- Click the "Add" button

To delete a mapping from the list:

- Select a mapping from the list
- Click the "Del" button

### 2. Default Image

Server will use default image for not mapped extensions.

### 3. Child Dir Image

Server will use this image to indicate the child directory

### 4. Parent Dir Image

Server will use this image to indicate the parent directory