NetPresenz 4.1 from netpresenz.com

NB: Please click the "I Paid" checkbox in NetPresenz Setup - FTP Setup dialog.

Contents

What NetPresenz Does

NetPresenz is a Macintosh implementation of the WWW, Gopher and FTP server protocols. It should be compatible with most FTP clients, and all WWW and Gopher clients. Basically it allows your Mac to act as an FTP server so you (and others) can access your files from anywhere around the world. Obviously there are some serious security considerations you should look into before using this software (see the Security Considerations section). NetPresenz requires System 7, MacTCP 1.1, and File Sharing enabled. It honours the Users & Groups privileges and passwords, and supports multiple logins, anonymous FTP (user name "anonymous" or "ftp"), as well as MacBinary and BinHex transfers, and the "MACB" FTP command. You can run NetPresenz as a foreground

application (displaying the log), or as a background only application (use NetPresenz Setup to toggle between the two).

Features

Support WWW, Gopher and FTP connections.
Full CGI support.
Multiple simultaneous users.
Honours System 7 Users & Groups (in fact depends on them!).
Server Side Includes (SSI), counters and include files, file modification date and so forth.
CGI authentication.
Missing files support.
Supports BinHex and MacBinary transfers.
Supports the MACB command.
Supports Alias resolution for directories and files.
Allows login to other AppleShare servers on the local network.
Allows different formats of a file to be fetched.
Pattern matching in change directory command.
Individual initial directory and commands for any user.
FTP site descriptions sent after login.
Directory descriptions sent after CD command.
Supports the CatSearch feature to allow very fast searches.
Remote site access restrictions.
ISO international character translation.
Allows setting of the owner, group and access permissions.
Allows users to change passwords on all logged in servers.
Supports Scrambled & Two-way passwords.
Supports process control (launching, listing or quitting applications).
Runs in the foreground or the background.

Using NetPresenz Setup

NOTE: If you have problems logging in, check the Summary window and see if it gives you any clues.

NOTE: Some preferences are set with the Internet Config application (these are shared between many different Internet applications, so you only have to set them once and then all supporting applications will use them). Make sure you run Internet Config at least once and set your personal preferences. If you don't save your preferences in Internet Config, NetPresenz will not have any way to map extensions to types and creators and MIME file types, so files transferred using WWW or FTP may not appear correctly.

Before you can run NetPresenz, you must be running System 7, with File Sharing turned on, and you must set up File Sharing to give appropriate privileges to

users and guests (including enabling guest logins if you want to allow anonymous logins). For a user or guest to log in, at least one shared folder must be accessible to them.

Then you need to run NetPresenz Setup. Click on each icon in turn and set the configuration as you want it. For FTP access, you must set the access levels in the FTP Setup window. For Gopher, you must enable Gopher access and specify the root directory in the Gopher Setup window. For WWW, you must enable WWW access and specify the root directory in the WWW Setup window. Also enable CGI scripts if you plan to use them. Other than that, the defaults will do.

By default, NetPresenz will run in the foreground displaying a simple log. If you wish it to run in the background, choose Background Mode… from the File menu in NetPresenz Setup, optionally select the copy of NetPresenz to modify, and then click the Background Only checkbox followed by the Set button.

FTP Setup

There are three types of FTP users:

• Owner - The Macintosh owner (as defined by the Users & Groups owner name).
• User - Anybody with a user name and password set up in the Users & Groups settings.
• Guest - Anonymous logins (username of "ftp" or "anonymous", any password).

and there are four privileges:

• None - No access.
• Read Only - Access to read existing files, but no write access.
• Upload - Access to read existing files, and add things to the file system, but not change what is already there (including not overwriting existing files).
• Full - Full access to the file system, read/write files, delete files and (empty) directories, rename files.

You might also want to set up initial directories in the FTP Users window for some users. Initial directories the first listing a User will see when they connect, it is not an access restriction. Probably a default for all users will be sufficient, but you can set up each user with their own directory if you want. The easiest way to configure the default directory is to use the Choose button. The path it produces, or the path you type in to NetPresenz Setup is the directory path as seen by the user. So if you have a shared folder /harddisk/sharedfolder, and the user can only see the sharedfolder, not the harddisk, then the path should be "/sharedfolder". The owner can usually see the entire volume so you would set the owner path to "/harddisk/sharedfolder".

NOTE: You should probably not set a default directory for the Guest/Anonymous user because some silly clients (particularly clients where FTP is not their main concern, like Netscape and the CompuServe FTP client) don't deal well with anonymous directories that don't default to the root.

WARNING: This does not add any security to your site, it simply sets their initial directory, it does not constrain them to that directory. File Sharing is the place to enforce real security. All NetPresenz access by the users goes through File Sharing in the same way it would if you logged on from another Mac using the Chooser. Ensure that this is secure and NetPresenz will be secure.

When you have finished setting up the privileges, you can create or edit the files in the "Startup Messages" folder (which may reside either in NetPresenz's folder or in the "NetPresenz Preferences ƒ" folder in the Preferences folder). The files in the Startup Messages folder will be returned when the user with that name logs in. So for example the "Peter Startup" file will be returned to the user named "Peter" when he logs in, and the "Anonymous Startup" file will be returned when a user logs in as either "ftp" or "anonymous". If a file doesn't exist for the user, the file "Default Startup" will be used instead if it exists. Also, you can put a file "!Folder Info" in any folder and it will be displayed to the user when they change into that directory. The files should be text-only and will be converted to ISO 8859-1 before being sent. Note that some clients may not display this information.

NOTE: At most 5k is returned at one time, so restrict your files to reasonable sizes. If you want to have the file listing of your site available (or any other large file), put the listing into a file, and then refer to that file in your Startup or !Folder Info files.

WWW and Gopher Setup

The WWW and Gopher servers uses the Guest access of AppleShare to define the visible files and folders. Both require you to specify the root directory, which is the directory the user will see when connected to your site without specifying a particular path (eg http://yourmac.yoursite.com/). If you have a shared folder named "sharedfolder" and a folder named "Pub", both of which are visible to guests, then type "/sharedfolder/Pub" into the Root Directory field or use the Choose button and select the appropriate starting directory.

The WWW server does not return directory listings. When asked for a directory, it returns the file "index.html" in that directory. So in the above example, when a user asks for http://yourmac.yoursite.com/, NetPresenz will return the file "Harddisk:sharedfolder:Pub:Index.html". Alternatively, if you enable CGI scripts, you can use a CGI script to return a directory listing (or any other information) since NetPresenz will look for various other files like "index.acgi" or "index.cgi" if it can not find an "index.html" file. An example script that returns the directory listing is include in the CGI Examples folder.

With Gopher you can use the Gopher Listing menu item to change the names of files, and to add links to other gopher servers. NetPresenz Setup will let you edit them to change the names, or remove some of the links. You can also add an index entry, which will let the user find files by specifying part of the name.

If you are running NetPresenz on a server or other dedicated Mac, you may prefer to run it in the foreground, instead of as a background only application. It will get a little more processing time, and be able to display the log file in real time.

FTP Setup Details

The FTP Setup window allows you to restrict the maximum number of users connected at any one time. Generally speaking this can be left as a large number (999). The more users you expect, the more memory you should allocate. In our testing we used the default partition of 750K to service over 12 simultaneous users without any problems.

The FTP port lets you server FTP from a different port. If you enable Simple Internet Version Control NetPresenz will inform you when a new version of NetPresenz is released.

Decode Stored BinHex files causes NetPresenz to automatically decode incoming BinHex .hqx) files. By default you should leave this enabled since NetPresenz automatically encodes files as either BinHex or MacBinary at the FTP clients request (and BinHex files are considerably larger than MacBinary files). The only situation you may need to use this flag is when you are uploading files to be served from a web server (a job which is really better suited to an FTP server).

Note: NetPresenz will automatically decode incoming MacBinary (.bin) files. There is no option to enable or disable this feature.

Add .hqx initially enabled presents all files with a resource fork as file.hqx in any listings. When the client requests the file the file will be BinHexed on the fly by NetPresenz. This flag should be switched off by default.

Honour Invisibles means NetPresenz will not list invisible folders (like the Desktop Folder) in file listings.

Scripting NetPresenz Setup

Adding users under AppleShare can be laborious, so we have added scripting support to NetPresenz Setup. NetPresenz Setup is now Apple scriptable with the commands deleteuser, setuser, getuser and listusers.

By example:

```
tell application "NetPresenz Setup"
     deleteuser "user1"
     setuser "user1" directory "dir1"
     setuser "user2" directory "dir2" command "smnt ¬
   volume: server@zone: username: password"
     getuser "user3"
     listusers
end tell
```

Using NetPresenz

First, make sure that your AppleShare privileges are set up correctly. Tom Daley reported to me that he had someone try to access his machine within three minutes of first launching NetPresenz! So don't think you'll be safe if you're quick!

To use NetPresenz, simply put an alias to it in the Startup Items Folder and launch it. After that it will run either in the foreground showing the log window, or as a faceless background only application accepting connections. You can then use any FTP client (like Anarchie or Fetch on Macs, or the standard Un*x ftp program), any Gopher client (like TurboGopher), or any Web browser (like MacWeb or Netscape) to access your Mac. For information on how to use them, see their respective documentation.

If you are also running NCSA/Telnet, make sure to disable its FTP server or people will (randomly) get either its server or NetPresenz. You can Quit NetPresenz by launching NetPresenz Setup and holding the option key down while you quit it, or by using ProcessWatcher or AppleScript "tell application "NetPresenz" to quit".

A log file named "NetPresenz Log" is kept in the Preferences folder that records who logged in or out and when, as well as what files they put or get.

Referring to your Server

You can reference your macintosh by looking up its IP number in your MacTCP or TCP/IP control panel. (It also comes up in the log file when NetPresenz starts up.) Your IP address is a dotted quad of 4 numbers, like 130.95.156.3 or 1.2.3.4. Then you can use the URL:

http://1.2.3.4/   for WWW
or
ftp://1.2.3.4/   for FTP

...where 1.2.3.4 is your IP number. If you want to reference your machine by name (like http://www.mymac.net/) then you need to have an entry put in your DNS by your ISP (Internet Service Provider) or Network Admin.

DNS stands for Domain Name Server. The way machines actually find each other is by IP number (a doted quad of numbers like 130.95.156.3)- but what we usually type is a name like earwax.pd.uwa.edu.au or stairways.com.au. Your DNS looks up what IP number is associated with the name of the machine.

There is, however, an additional complication if you are connecting using a modem you are probably using PPP (Point to Point Protocol) and PPP links often (usually) don't give you a static IP number- it varies every time you connect. Thus any links to your page become invalid the moment you disconnect and reconnect. You can ask your ISP whether it is possible to get a static IP number through them, and if so how much it will cost.

Using NetPresenz from a Un*x FTP Client

As an extra feature, if a file "thefile" (for example) exists on the Mac, then you can issue the following FTP commands to get different formats of that file:

get thefile - get the file in the current transfer mode.
get thefile.data - retrieves the data fork (in ASCII or binary).
get thefile.rsrc - get the resource fork of the file (binary mode only).
get thefile.info - get the info fork of the file (binary mode only)
(the info fork is the same format as the first 128 bytes of the MacBinary file).
get thefile.hqx - get the file after converting it to BinHex format.
get thefile.bin - get the file after converting it to MacBinary format.
(you can also use .mb, .macbin, .macbinary) (binary mode only).

Also, you can put BinHex or MacBinary files and they will be converted automatically:

put thefile.hqx - put the file after converting it from BinHex format.
put thefile.bin - put the file after converting it from MacBinary format.
(you can also use .mb, .macbin, .macbinary) (binary mode only).

Fetch and Anarchie will both transfer in MacBinary format, which means the file will be exactly duplicated from one Mac to the other, so you can ignore all this.

NOTE: All of these examples assume you're using the standard Un*x FTP client. If you're using some other system consult its documentation for the equivalent commands. Also, when using the Un*x ftp client watch out for usernames with spaces in them – if you type "user fred bloggs" it thinks the username is fred and the password is bloggs, instead type "user "fred bloggs"".

The dir command also support various unix-like flags, including CspFl (for columnar display, display size in k, display directories with a / on the end, and long display), eg:
dir -CF

NetPresenz also supports the "MACB" command, which allows you to get the file in MacBinary mode.

quote macb e - turns MacBinary transfer mode on.
quote macb d - turns MacBinary transfer mode off.

Remote Volume Mounting

To enable access to another file server the appropriate users must have the "Remote Mounting" enabled in FTP Setup. By default only the owner can mount volumes.

All privileges are contingent on having the appropriate privileges through AppleShare. Thus if a particular user can't access a particular volume using AppleShare they won't be able to through NetPresenz either (even if you give them Full access). The same applies for other servers of course.

NetPresenz works fine with CAP servers and Netware Macintosh servers, but you'll have to enable Clear Text passwords in the Security window. This is a slight security flaw, but since the password gets to NetPresenz in plain text, it's not much worse than normal.

If you normally want to have the users able to access a remote server right away then the easiest way to do this is to add a SMNT command in the "Login Commands" of the "Default" entry in FTP Users. Or you may want to tell the users about being able to mount other servers by putting a note in a "!Folder Info" or Startup Message file.

For WWW and Gopher users, you can mount other servers by adding an SMNT command to the Guests user in the FTP Users window.

You mount remote AppleShare volumes using the "SMNT" command like this:

quote smnt volume:server@zone:username:password

@zone defaults to @*, and the username and password default to your login username and password (this is a slight security risk, but you shouldn't leave any FTP connection unattended any more than you would leave a telnet connection unattended, so it should not be a problem). So to mount HardDisk on machine TheMac in your zone, using your username and password, you can type:

quote smnt HardDisk:TheMac

To mount all disks on a Mac named "server" in your zone, just type:

quote smnt server

Note: Site commands in the "Login Commands" section of the FTP Users window do not require the quote prefix (quote tells the FTP client to pass the following text through without interpretation, unnecessary in NetPresenz).

Note: NetPresenz does not handle Server or Zone names with spaces in them.

Miscellaneous FTP Commands

Other commands include:

quote site u - display current usage stats (memory, connection, users, etc).

quote site v - display site statistics (number of logins, total transferred, etc).

quote site s - use short (8.3) names. Looks like a PC (yuck).
quote site l - use long (31 character) names. Default (much better).

quote site h [e or d] - enable/disable adding ".hqx" to the end of all files in directory listings.

quote site q - quit the server (the user must be the owner).

quote site index <search> - list the files that contain <search> in their name. Caveat: This doesn't work for AppleShare 2.0.* volumes. Also, it only uses long (31 character) names, irrespective of the short/long setting.

quote site p <password> - change your password. You must issue this three times in succession without any intervening commands, the first one with your old password as a parameter, and the next two with your new password. This will change your password on all currently logged in servers.

quote site c p <rwxr-x---> <directory> - set the permissions for a directory.
quote site c o <owner> <directory> - set the owner of a directory (the owner name cannot have any spaces in it - sorry).
quote site c g <group> <directory> - set the group of a directory (the group name cannot have any spaces in it). You can use "none" as a group name to set it to no group.

quote site a list - list running processes.
quote site a nlst - list names of running processes.
quote site a oapp crea - launch application with creator type "crea".

quote site a quit crea - quit application with creator type "crea".

Also, you can use pattern matching in the cd command. Eg:

cd "/HD/System Folder"
cd /HD/System?Folder/pref*
cd /HD/syst*
cd /HD/Sys*fol*

You can use "quote help" to find out some information on the other commands.

quote help
quote help pass
quote help site
quote help "site f"

The multiline response returned by the login command sequence, the cd command and the help command may confuse some old FTP clients. This feature can be disabled by inserting a dash "-" before either your username or password (which means you will have to put an extra dash before any username or passwords which start with a dash, but that's probably not a problem :-)

WWW

NetPresenz supports the widely popular WWW protocol. It has support for Server Side Includes, a full CGI architecture, Java and missing files.

To allow WWW access to your machine you need to enable WWW and configure the root directory in NetPresenz Setup's WWW Setup window, as well as enabling Guest access via AppleShare.

WWW types are determined from the Internet Config file mappings database, so make sure you have configured that correctly.

Note: Problems can occur when you do not have the default file mappings in your Internet preferences. This can come about when an application other than Internet Config creates the Internet preferences file and doesn't include all the default file mappings or the Internet preferences file becomes corrupted.

If you have problems with your files showing up as plain text when they should be HTML, or GIF files that don't display in your browser window, delete your Internet Preferences, run Internet Config and re-enter your personal preferences.

Extensive examples of HTML, Server Side Includes and CGIs are given in the Example folder. The following sections simply document NetPresenz's capabilities, see the Example folder for working examples of these features.

Server Side Includes

Server Side Includes are a simple way to introduce dynamic content into your web pages. SSIs are additional HTML tags (using the HTML comment format) which the server parses as the pages is uploaded.

To use Server Side Includes you must name the file with a .shtml suffix. NetPresenz always looks for the .shtml file first. If you refer to a web page called "truffles.html", NetPresenz will first look for a document called "truffles.shtml", then it will look for document called "truffles.html".

Document Information

These tags apply to the document in which they are inserted.

<!--#echo var="document_name"--> Name of the current document.
<!--#echo var="document_uri"--> or <!--#echo var="script_name"--> Absolute path from the WWW Root Directory of the current document.
 <!--#echo var="last_modified"--> or <!--#fsize--> Displays the file size in bytes.

File Information

These tags are used to refer to other files.

<!--#include file="filename"-->   Inserts the contents of the file "filename" into the HTML document at this point.
<!--#fsize file="filename"--> Inserts the file size of the file "filename" in bytes.
<!--#flastmod file="filename"> Inserts the modification date.

Note: Instead of using file="filename" you can use virtual="/fullpath/filename". The file argument is relative to the referring document, the virtual argument is an absolute path from the WWW Root Directory.

Counters

Counters are maintained internally by NetPresenz. Each counter is given a name. Every time the counter is accessed using the #counter tag NetPresenz increments the counter. Counters are maintained between quits.

<!--#counter var="counter_name"--> Displays and increments the counter.
<!--#echo var="counter_name"> Displays but doesn't increment the counter.
<!--#silent_counter var="counter_name"--> Increments but doesn't display counter.

Currently there is no way to zero a counter. Just use a different name.

Information About the Client

These tags insert information about the computer which is requesting the information.

<!--#echo var="query_string"--> The query string which was used to discover this document. May be blank.
<!--#echo var="remote_host"--> or <!--#echo var="remote_addr"--> The client's IP number.

Server Information

Information about the server and the server machine.

<!--#echo var="server_name"--> The server's DNS Name.
<!--#echo var="server_software"--> The server software's name and version number.
<!--#echo var="server_port"--> The port the server software is running off (usually 80).
<!--#echo var="date_local"--> The local time.

CGIs

CGI scripts must be applications (so you must save AppleScripts as applets for example). They also must have a file extension of ".cgi", ".acgi", or ".fcgi". With ".cgi" scripts are executed synchronously (that is, NetPresenz stops processing all other requests until the script responds). The other two forms are executed asynchronously - NetPresenz asks the script for a response but continues processing other connections while the script executes. In general you should use ".acgi" unless there is a good reason not to.

CGI scripts can do lots of cool things, check out the Showcase folder for some ideas. There are lots of other CGI scripts available on the Internet, check out the util/comm/www folder on the UMich archive for lots of interesting scripts.

Warning: NetPresenz will not execute a CGI which is in a publically writable folder. Make sure that Guests do not have Make Changes enabled in the Sharing... information of the folder containing the CGI.

Java

NetPresenz support Java. Java examples are given in the Examples folder.

Note: If you are having problems serving Java applets make sure you have Java file mappings in your Internet Config File Mappings. The Java file mappings are in the default file mappings in Internet Config 1.3. If your Internet Preferences were created in an earlier version of Internet Config you may have to open Internet Config, click on the File Mappings tile and select Default. This will

update your File Mappings to the Internet Config 1.3 (although you will lose any new file mappings you have added).

Missing files

NetPresenz has excellent missing file support. If a file is requested which is absent NetPresenz searches backwards up the directory structure for a 'Missing.shtml|html|cgi|acgi|fcgi' file. If the client looks for:

/dir1/dir2/dir3/nothere.html

NetPresenz looks for (in order):

/dir1/dir2/dir3/missing.shtml
/dir1/dir2/dir3/missing.html
/dir1/dir2/dir3/missing.cgi
[…etc…]
/dir1/dir2/missing.shtml
/dir1/dir2/missing.html

...and on on. Since CGIs are passed the original URL (with the full path) a clever CGI could 'fake' the existence of the missing file, or at least respond intelligently to the absence of the missing file.

Gopher

NetPresenz also supports the Gopher protocol, mainly designed to simplify anonymous FTP. You can get several Mac clients for Gopher, including TurboGopher, from the usual FTP sites.

To allow Gopher access to your machine you need to enable Gopher and configure the root directory in NetPresenz Setup's Gopher Setup window, as well as enabling Guest access via AppleShare.

Gopher types are determined from the Mac file type (you can edit STR# 180 to add other types).

You can also add links from your machine to other servers. Launch NetPresenz Setup, choose Gopher Listing… and select your gopher directory. You might also like to add an index entry to the directory - users who connect to your gopher server can use this to search for files by name.

Security Considerations

"Be afraid. Be very afraid" - The Fly

Allowing NetPresenz to run on your Mac poses huge security questions. Some of the same security questions are also posed by System 7 File Sharing. However with NetPresenz they are much worse because you're making your Mac accessible to everyone on a world wide network. Things you definitely should do:

Disable guest logins unless you actually need them. You need guest logins enabled for anonymous FTP, and Gopher or WWW access.

If you want a few people to have access, perhaps a better idea than guest login is to give them a single account with a shared password. This is more secure than guest logins, since no matter how many people they tell the password to, it will always be less than the number of people who could log in as guests.

Disable remote mounting to guests or users. Again, most people don't need access to volumes other than those directly on your Macintosh (That is the Entire Volume and Shared Folder volumes). You Definitely Should Not allow access to other volumes on the network if you do not control them, and you Definitely Should inform the administrators of any other servers on the network that you will be allowing access to them so that they can secure their servers as well.

Only share a small portion of your file system. That way you don't have to worry about the rest of it. You, as the owner, can still get access to it by using the Users & Groups control panel to turn on the "Allow user to see entire disk" checkbox for your user.

Verify that the file sharing privileges are set correctly. A good start is to change everything to owned by you and only visible/modifiable by you. Then change the privileges on areas that you want to give users and guests access.

Keep your password secure! Anyone on the Internet with your username, machine address and password will likely be able to delete every file on your harddisk. This is a scary thought. You should be scared. Don't give your password out and don't use an obvious password. Obvious passwords include, but are not limited to, any of the following patterns (in decreasing obviousness)...
your user name.
your real name.
your initials.
your husband's/wife's/girlfriend's/boyfriend's/dog's/frog's/machine's etc name.
your car licence plate, make, model, etc.
your birthday.
your student/MediCare/social security/tax file/etc number.
any of the above backwards.
any word from a dictionary (especially an electronic dictionary).
Good passwords can be found by making up nonsense words or using letters from a common saying and by including non-alphanumeric ASCII characters.

Invalid login attempts are logged to a log file in the Preferences folder (assuming logging is enabled). Check the log file regularly to improve your security.

If in doubt, don't run NetPresenz. I can't accept any liability for any problems. I have done my best to make sure it is secure. If that is not good enough, don't use it. It's as simple as that.

Avoid the Wrath of your Network Admin

FTP can use a lot of bandwidth and so you should check with the system administrators on your network before setting up an FTP site for anything more than personal use.

Also, since NetPresenz can make other servers on the entire AppleTalk Internet available for FTP, you should ensure that the administrators of such machines (including anyone who has File Sharing enabled on their Mac) are aware of this before you allow remote mounting.

I can't accept any responsibility if you use this software in an irresponsible manner (in fact I won't accept any responsibility no matter how you use this software!). As long as you disable remote mounting and don't try to become the next Info-Mac archive, it shouldn't be much of a problem, but check with your network administrators anyway.

Limitations

NetPresenz & NetPresenz Setup require System 7 with File Sharing turned on, MacTCP 1.1 or OpenTransport 1.1 (or later versions) and probably require the 128k ROM (or later). NetPresenz should work fine with MacTCP 2.0.6 or Open Transport.

AutoDoubler users should exclude the folders that are shared with File Sharing. Also, AutoDoubler causes uploads from the local machine to fail with an I/O Error - uploads from other machines seem to work ok, and it's useless to upload from the same machine anyway, so this should not be a problem.

NetPresenz requires File Sharing or AppleShare which in turn requires AppleTalk. If you are on a serial network (eg SLIP or PPP), then you may not have an AppleTalk network and you may not want to waste a serial port just to turn AppleTalk on. You can get around this by using a Dummy network device which will let you have File Sharing on without any physical network connection.

If you use Open Transport you can use the Remote Only extension which comes in the Open Transport Extras directory of the Open Transport 1.1.1 installation.

Remote Site Access Restrictions

You can limit the machines that can access your site by restricting access to certain IP ranges. Because this would be very messy to do in a sensible user interface, the only way to set these restrictions is by using ResEdit. From ResEdit, create a STR# resource (in either the NetPresenz Preferences file or NetPresenz (the former overrides the latter), give it an id in the range of 600-699, and a name ending of:

"<username> Site Restriction" where <username> is the user you are restricting.
"Owner Site Restriction" to restrict the owner.
"User Site Restriction" to restrict any unspecified user.
"Anonymous Site Restriction" to restrict anonymous logins.
"Default Site Restriction" to restrict anyone not specified above.

NetPresenz checks them in that order (for gopher restrictions, it checks Anonymous Site Restriction or Default Site Restriction). Each resource consists of a sequence of pairs, IP number, IP mask, both in dotted decimal format (eg 134.7.70.70). The remote IP is checked against the IP, with only the bits in the mask being relevant. If it matches then the user is allowed access. If it matches, but the IP string started with an exclamation mark then access is disallowed. The last match overrides previous ones, and if there are no matches then access is denied.

By default, NetPresenz has a single "Default Site Restriction" STR# resource, which contains 0.0.0.0, 0.0.0.0 so access is allowed from anywhere.

Here are some examples, first if you just wanted to restrict anonymous logins to inside 134.7, and everyone else has no restriction, then you create two STR# resources, either in NetPresenz Preferences (which is checked first) or NetPresenz, like this:

"Anonymous Site Restriction": 134.7.0.0,255.255.0.0

You don't need to create the "Default Site Restriction", because it already exists in NetPresenz, if you wish to override the default, either change it in NetPresenz or add a "Default Site Restriction" to NetPresenz Preferences.

Ok, and a more complicated one, say you wanted anonymous access to everywhere inside 134.7 except 134.7.70.70, user access to everywhere inside 134.7 and 130.95, user "Fred" and the owner access from everywhere, do this:

"Anonymous Site Restriction": 134.7.0.0,255.255.0.0, !134.7.70.70,255.255.255.255
"User Site Restriction": 134.7.0.0,255.255.0.0, 130.95.0.0,255.255.0.0
"Owner Site Restriction": 0.0.0.0,0.0.0.0
"Fred Site Restriction": 0.0.0.0,0.0.0.0

Note: These restrictions apply only to the control connection, not the data transfer connections, so it is still possible to use proxy-ftp to transfer files directly to a restricted machine, but the user must be connected from an allowed site.

How It Works

NetPresenz listens for TCP connections on port 21. When a connection is achieved, it waits for commands to be sent to it. Commands all have a simple form, there is a 3 or 4 character command (eg, RETR for retrieve file), and some parameters (eg, filename). NetPresenz interprets these commands, carries out their actions, and replies with a one line message, the first three characters of which are a 3 digit reply that can be interpreted by the FTP client, then the rest is human readable information. The reply codes are 1yz for preliminary success (action started), 2yz for complete success (action finished successfully), 3yz for intermediate success (requires another command before any action is taken), 4yz for temporary failure (try again later), and 5yz for permanent failure (give up and go home). For more information on the formats of these commands see the various FTP related RFCs. Some commands may reply with a multiline response, in which the first line begins with a three digit response code followed by a dash "-" followed by several lines of text and terminated by a line with the same response code and a space followed by some text. This confuses some servers, you can disable this feature by starting your username or password with a dash "-".

NetPresenz also listens to port 70 for gopher connections. It then accepts a single line specifying either a folder, file, or index, and returns the info for it. The gopher server logs in as an AppleShare guest user, so guest access must be enabled (it was either that, or NetPresenz would have to know a user password, which I wanted to avoid). The root of the gopher tree is specified by the login directory for fake user "Gopher" (it defaults to /). This root is enforced, so you can't have aliases pointing to folders outside this area (well, you can, but it won't work very well). Aliases to files outside the area work. You can reduce this restriction with the "GopherRoot" user directory, but that will allow anyone knowledgeable in the gopher protocol to get at any file inside that root.

NetPresenz talks to the file system on the local Mac (and other servers) exclusively by using the same protocols as if it were accessing an AppleShare server (the single exception is the startup messages which are read via normal file system calls). The user logs in by giving a user name and password. This in turn is passed to the System 7 server (or AppleShare server) and an attempt is made to log in to the server. If the log in fails, an attempt is made to log in as a guest user. If either attempt succeeds, the volume is made available to the user. If the user tries to log in as either the owner or a user, they must successfully (non-anonymously) log in to at least one local volume or the whole connection is disallowed. Since all file system access is done through the AppleShare protocols, it should be virtually impossible to circumvent their protections. You

should set up your system in such a way that irrespective of the privileges in NetPresenz Setup (which are not guaranteed in any way!) the user cannot do too much damage. Thus users and guests should only have write privileges to areas of your file system that you wish them to be able to trash.

For more information

Come to the netpresenz web site at:

   http://www.netpresenz.com/

or post a message to the netpresenz discussion mailing list at:

   netpresenz@netpresenz.com