IceWarp Unified Communications

FTP Service Reference

Version 12.1

Contents

FTP Service

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About

IceWarp Server provides a feature-rich FTP server, allowing you to offer your users file storage areas which can be used for backups, web site hosting or any other standard file storage purpose.

Features include:

- Full standards compliance

  Use any standards-compliant client

- SSL support

  Allowing for highly secure data transfers

- Group access policies

  Allow access for defined group(s) of users

- Scheduled synchronization

  Synchronize files and folders with a remote FTP location

- Multiple FTP hosts

  Allows many IceWarp FTP Servers on one instance of IceWarp Server

- UTF8 support

  Full support for UTF8 encoded files

- Large file support

  Transfer files of any size – restart supported for lost connections

- IPv6 protocols and extensions

  No problem as nodes migrate from IPv4 to IPv6

- Advanced Security features

  Allow and deny access by IP address (specific and masks)

Reference

This chapter describes the **FTP** node of the IceWarp Server administrative console.

General Tab

The **General** tab allows you to define one or more IceWarp FTP Servers on your server.

⚠️ BE AWARE: The FTP service runs under the **Control** service so if this is not started, the FTP service will not run correctly.

The FTP service allows you share files and folders with users who have an FTP client.
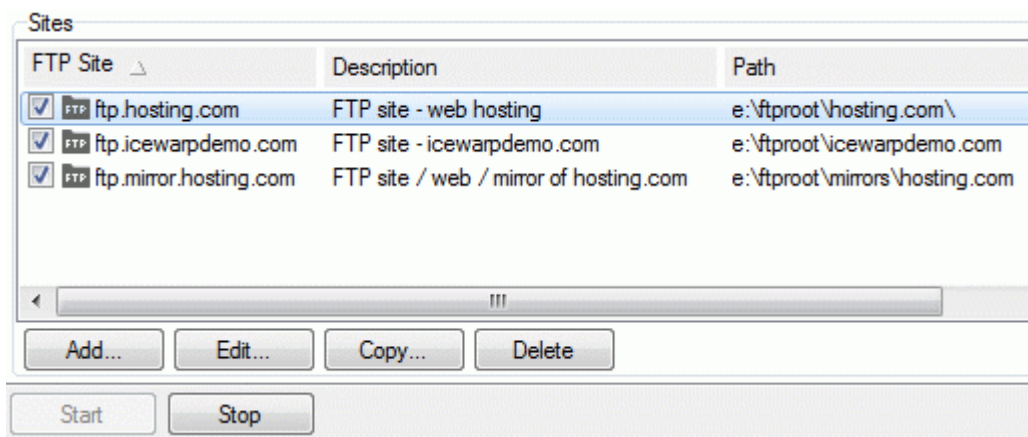
Specific users can be defined for each service, and you can also allow anonymous access, so anyone can access the files.

📝 *NOTE: Access mode to the service can be set on both domain and user levels. See the appropriate sections ([domain] – Policies, [user] – Policies).*
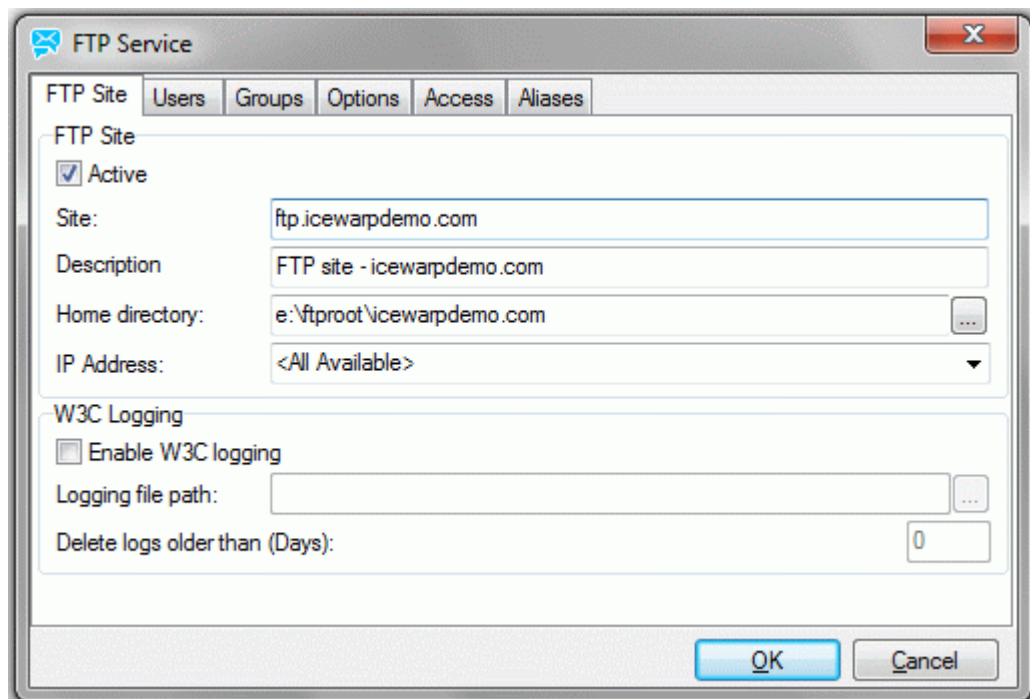
Sites

This section shows a list of defined IceWarp FTP Servers:

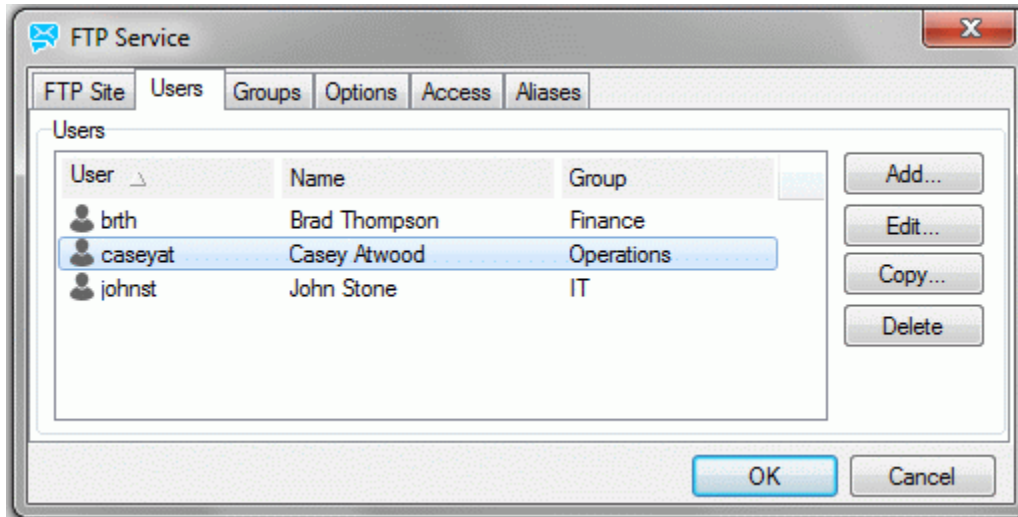| Button	Description
Add	Click the button to define an FTP site. The **FTP Service** dialog is shown.
Edit	Select an FTP site definition and click the button to edit this definition. The **FTP Service** dialog is shown.
Delete	Select an FTP site definition and click the button to delete this definition.

FTP Service Dialog

FTP Site

Field	Description
Site	The URL used to access the FTP site.
Description	Short descriptive text for this FTP service.
Home directory	The root folder (or home directory) of the FTP site. IceWarp Server will automatically display any subfolders. It is possible to use **path variables** here: *$$homedir$$, $$username$$ and $$groupname$$* are allowed, and additionally *$$domain$$* and *$$email$$* if you use system integration. Read more about path variables in the **FTP Hints** section. Use the '...' button to open a standard dialog tor select the home directory.
IP Address	If you need to bind this service to a specific IP address, specify it here. Use the drop down list to show all IP addresses available for this machine, plus the ***All Available*** option. *NOTE: If you need to run multiple FTP sites, you must use a separate IP address for each site, with DNS records set up appropriately.* *However, you can specify different folders for different users under the same FTP site to give the effect of having separate FTP sites.*
Enable W3C logging	If checked, all the connections are logged in W3C format which is a standardized format so you can use your own parsers etc. to easily analyze the logs.
Logging file path	The path to log files. It supports time variables like ***yyyy mm dd*** in the file name. e. g. ***c:\logs\FTP\"yyyymmdd".log***

Delete logs older than (Days)	Specify number of days – after this period logs are removed.
	NOTE: If 0 (zero) is left, logs are not deleted.

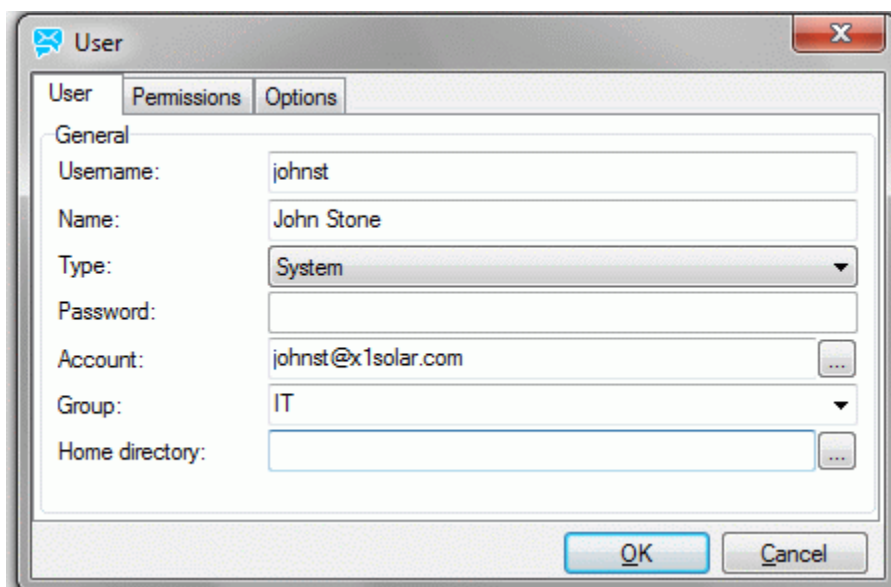## Users

Selecting the **Users** tab of the **FTP Service** dialog displays a list of defined users for this IceWarp FTP Server:

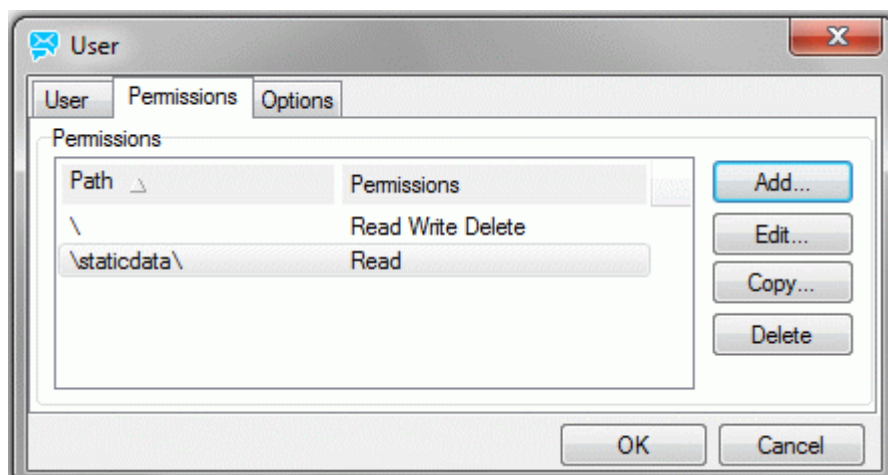| Button	Description
Add	Click the button to define a new FTP site user. The **User** dialog is shown.
Edit	Select a user and click the button to edit this user's definition. The **User** dialog is shown.
Delete	Select a user and click the button to delete him/her.

User

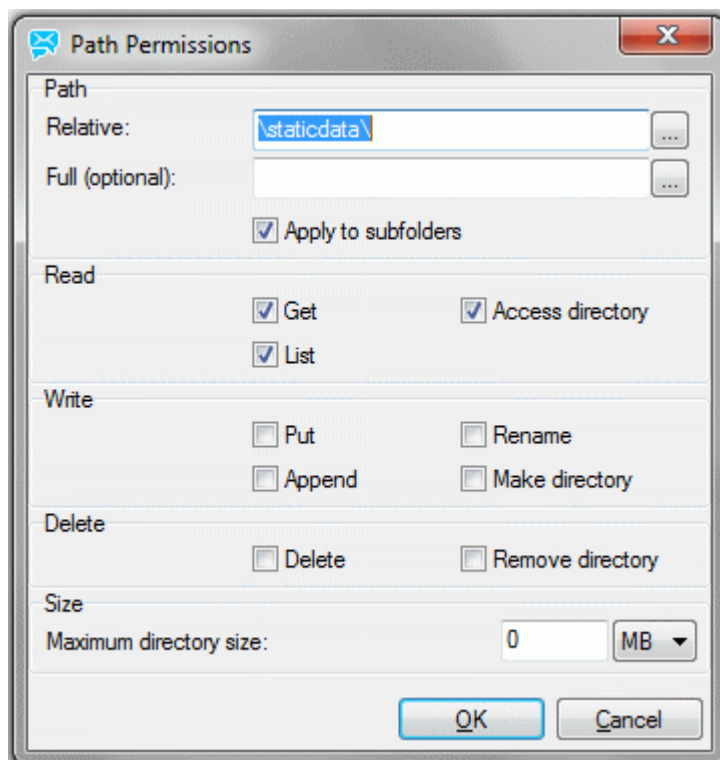| Field	Description
Username	The username for this account.
Name	Short descriptive text for this account.
Type	Choose one of these account types: **System** (default) Use this type if the user you are defining already has a standard user account within this IceWarp Server. For this type, you should specify the user account in the ***Account*** field and the user will have to use that account's password to access the IceWarp FTP Server. ***Example***: From the screenshot above – the user logs in with username: ***petersch*** and the password to account: ***petersch@migration.com***. **Local** Use this type for a user external to the IceWarp Server. A password must be specified in the ***Password*** field. **Anonymous** Use this type if you do not want to specify a password for the user. *NOTE: Do not assign administrator rights to this type of user as this could easily lead to abuse of your FTP site.*
Password	Specify a password here for users of the type of ***Local***.
Account	Specify the IceWarp Server account here for user type of ***System***. Use the '...' button to open the **Select Account** dialog, allowing you to easily locate and assign this account.
Group	Add this user into an existing group by selecting the appropriate group from the drop-down list. *NOTE: Groups must be defined before you can add a user (see **Groups**).*
Home directory	You can define a specific path for this user's home directory here. *NOTE: This value will override any group value defined.*

Permissions

Selecting the **Permissions** tab of the **User** dialog presents a list of defined folder permissions:

Button	Description
Add	Click the button to define a new FTP site permission. The **Path Permissions** dialog is displayed.
Edit	Select a permission and click the button to edit this permission. The **Path Permissions** dialog is shown.
Delete	Select a permission and click the button to delete it.

NOTE: Settings here will override any group settings for a group that this user is a member of.

Field	Description
Relative	Specify the path to the folder you wish to assign user permissions to. This is a relative path from the **Home directory** of the FTP site, and must contain a trailing slash character. Use just a slash (**/**) to specify the home directory. If you want to define default permissions for any directories not explicitly specified, enter a single asterisk, '*'.
Full (Optional)	Here you can optionally specify the full path to the directory you wish to apply restrictions to. This allows you to define a directory alias that can only be seen by this user or group, in addition to any global directory aliases you have defined. For example, you may want to give a group of programmers access to a source directory that other users cannot see.
Apply to subfolders	Check this option to have the permissions applied to subfolders.
Read Permissions	
Get	Allows the user to download files.
Access directory	Allows the user to browse to this directory with his/her FTP client.
List	Allows the user to list the directory contents. *NOTE: The difference between **Access directory** and **List** is subtle. If **Access directory** is enabled then the user's client can browse to that directory, but, if **List** is not enabled, the directory will appear to be empty.*
Write Permissions	
Put	Allows the user to upload files to this directory.
Rename	Allows the user to rename this directory.

Append	Allows the user's client to use the append command in this directory.
Make directory	Allows the user to create sub-folders in this directory.
Delete Permissions	
Delete	Allows the user to delete files from this directory.
Remove directory	Allows the user to delete this directory.
Size	
Maximum directory size	Specify here a maximum size for this folder, in MegaBytes. Zero value means that directory size is not limited.

Options

NOTE: Settings here will override any group settings for a group that this user is a member of.

Field	Description
Download speed limit	Enter a non-zero value to limit the speed at which this user can download data. Value of zero specifies no limit (up to your connection speed). This can be useful if you need to limit your bandwidth usage.
Upload speed limit	Enter a non-zero value to limit the speed at which this user can upload data. Value of zero specifies no limit (up to your connection speed). This can be useful if you need to limit your bandwidth usage.
Download amount limit	Enter a non-zero value to limit the amount of data this user can download. Value of zero specifies no limit (up to your connection speed). This can be useful if you need to limit your bandwidth usage.
Upload amount limit	Enter a non-zero value to limit the amount of data this user can upload. Value of zero specifies no limit (up to your connection speed). This can be useful if you need to limit your bandwidth usage.
Upload/download ratio	Enter a non-zero value here to specify how much data the user must upload compared to the amount he downloads. For example, value of 2 says that this user must upload 2 MB of data for every 1 MB he/she downloads.

Groups

An FTP user group is an effective template of options that can be applied to a user simply by making that user a member of the group.

A group definition lets you change an option once and have it applied to all users in the group.
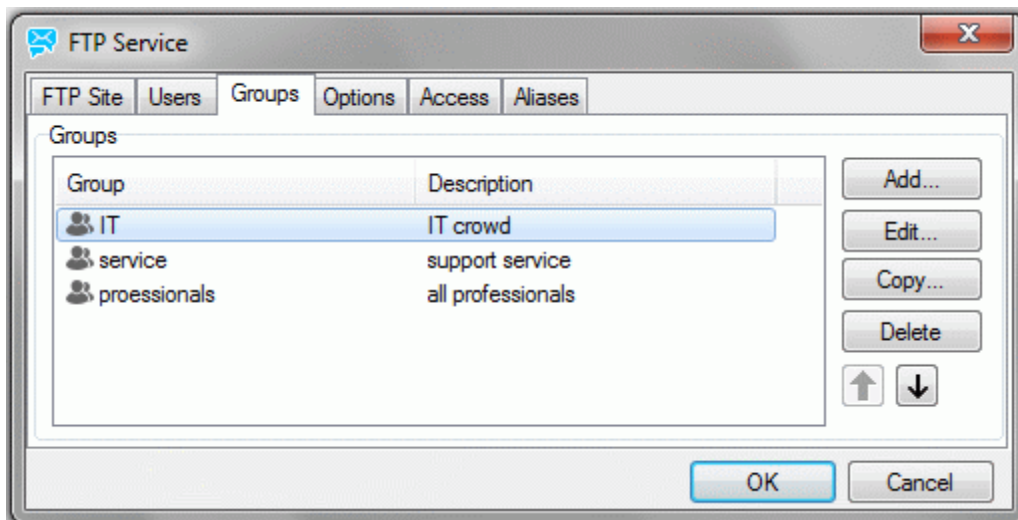
Within a group you can set the *Relative path*, *Permissions*, the upload/download limits and the upload/download ratio to be applied to members of the group.
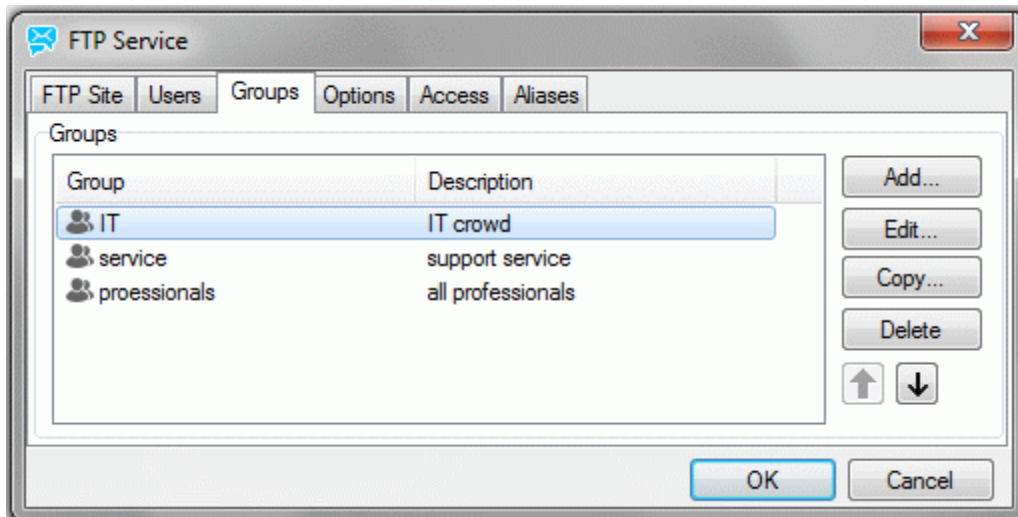
> ⚠️ BE AWARE: A user can only be a member of one FTP group.
>
> Any options you specify within the users tab will override the group options.

Selecting the **Groups** tab displays a list of defined FTP groups:

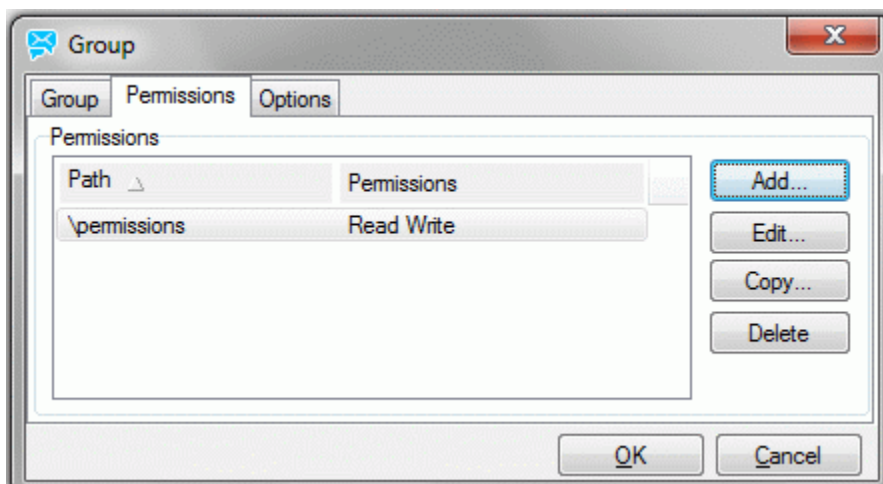| Button	Description
Add	Click the button to define a new FTP site group. The **Group** dialog is shown.
Edit	Select a group and click the button to edit this group's definition. The **Group** dialog is shown.
Delete	Select a group and click the button to delete it.
Up and Down arrows	Use the buttons to move groups within the list.

Group

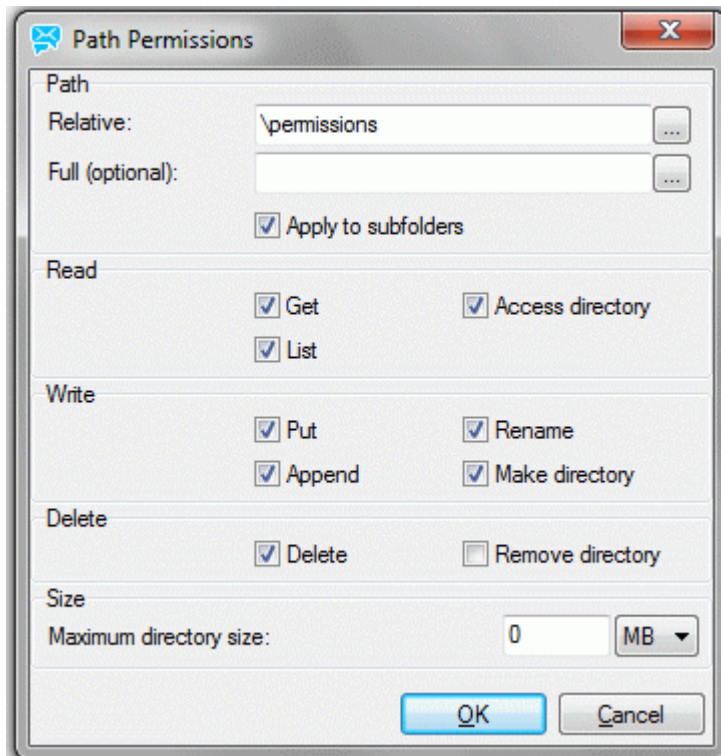| Field	Description
Name	Specify a name for the group.
Description	Short descriptive text to help you to identify the group.
Home directory	Specify a path to the group FTP directory. This is also the place where the group members are directed to after logging in.
System Integration	Integration and automatic linking with certain IceWarp Server system user accounts. Specify these accounts within the **Restrict to** field.
Restrict to	Specifies domains and/or users with which you want to integrate. Domains and users are to be separated with semicolon. Users of this group will now access FTP site with their email account user names and passwords. Use '...' for selection through the **Select Account** dialog, easy to use and straightforward dialog.

Permissions

The **Permissions** tab allows you to set default permissions for the group.

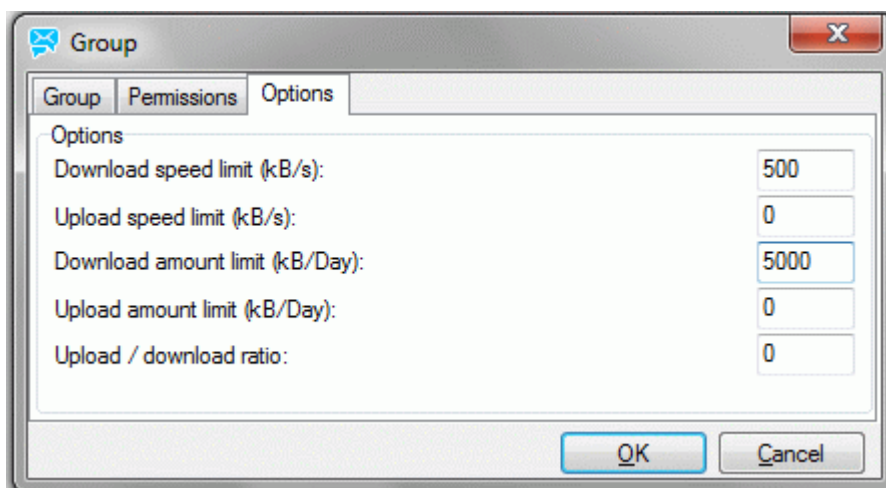*NOTE: Permissions assigned to individual members of the group will override group permissions.*

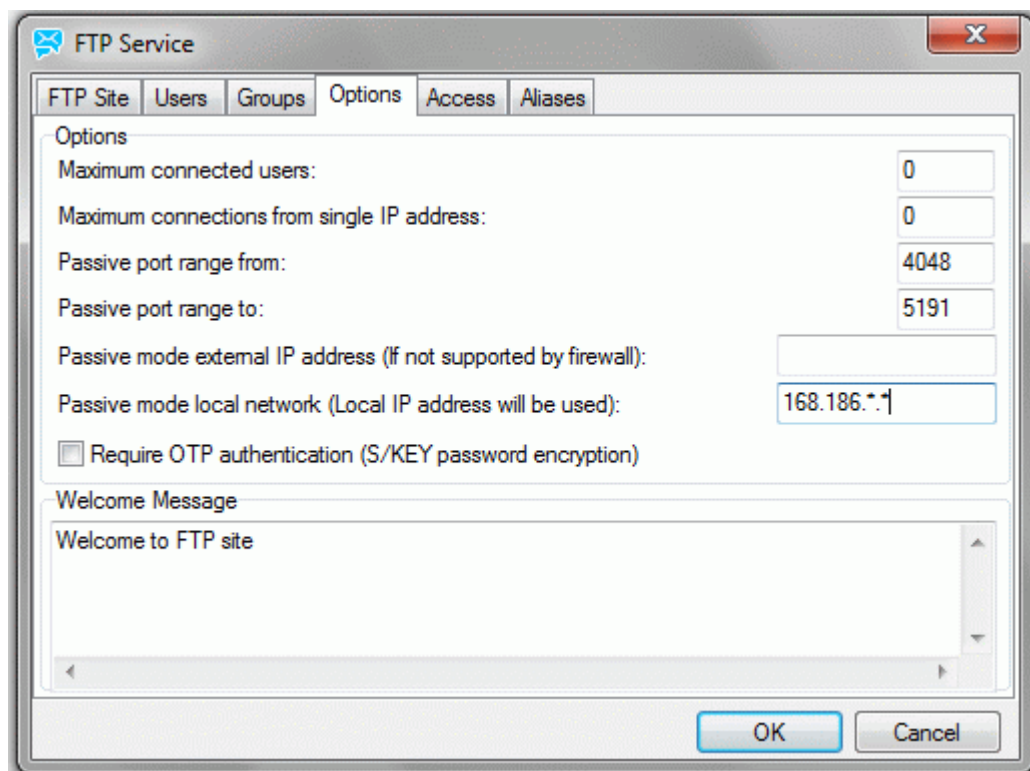| Button	Description
Add	Click the button to define a new FTP site permission. The **Path Permissions** dialog is displayed.
Edit	Select a permission and click the button to edit this permission. The **Path Permissions** dialog is shown.
Delete	Select a permission and click the button to delete it.

For description of this dialog, refer to the **Users – Permissions** chapter.

Options

For description of this tab, refer to the **Users – Options** chapter.

Options

Field	Description
Maximum connected users	Specify a non-zero value here to limit the number of simultaneous connections to this FTP site. If reached, a "4xx" error message is shown to other users. This is useful if you want to limit bandwidth usage.
Maximum connections from single IP address	Specify a non-zero value here to limit the number of concurrent connections from a single IP address. If exceeded, a "4xx" error message is shown.
Passive port range from/to	The IceWarp FTP Server communicates in both active and passive mode. For the passive mode communication, the server needs to use non-standard ports to communicate, these are specified here. Specify the low and high values of a range of ports the server can use for passive mode connections. *NOTE: These ports should be opened on you firewall/router.* You can read more information about how active and passive modes work in **FTP Modes** (http://slacksite.com/other/ftp.html).
Passive mode external IP address (If not supported by firewall)	Here you can specify an IP address to use for passive mode transfers. Useful and important when the FTP service is running behind a firewall or proxy.
Passive mode local network (Local IP address will be used)	Here you can specify an IP pattern to use for passive mode transfers in LAN. Example – see the figure above.
Require OTP authentication (S/KEY	In compliance with RFC-2289, server requests One Time Password authentication login. Enable this feature by ticking the check box to increase your server's security, but remember some FTP

| password encryption)	clients do not support this feature.
Welcome message	Specify a greeting here. This will be used to greet any client accessing the IceWarp FTP Server.

Access

The **Access** tab allows you to grant or deny access to the FTP site from specific IP address ranges.

You are presented with a list of defined IP address ranges:
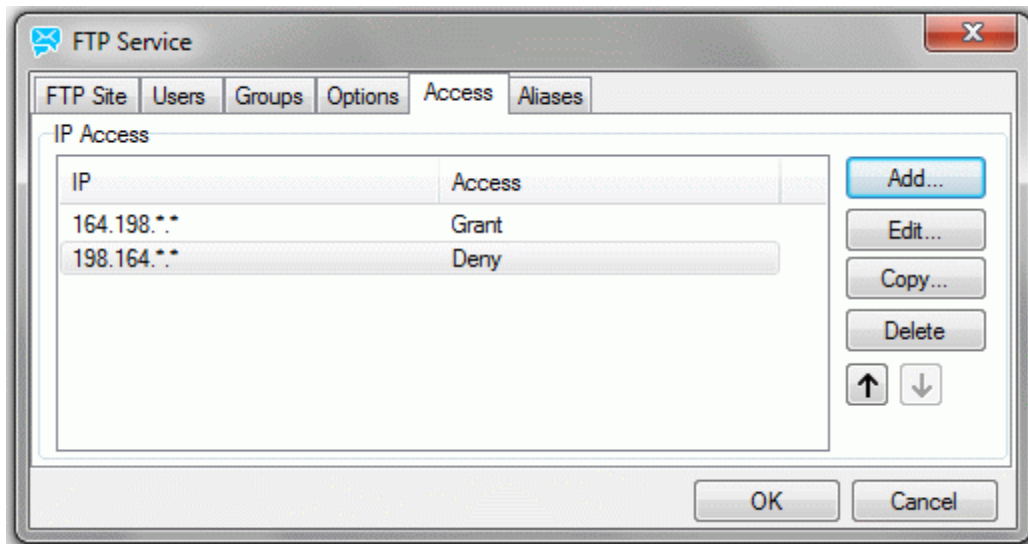
| Button	Description
Add	Click the button to add a new access definition. The **IP** dialog is displayed.
Edit	Select an access definition and click the button to edit it. The **IP** dialog is displayed.
Delete	Select an access definition and click the button to delete it.
Up and Down arrows	Use the buttons to move a definition within the list.
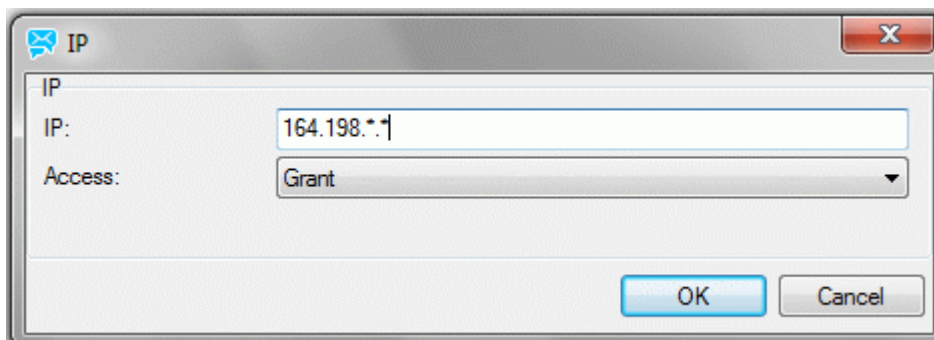
Field	Description
IP Addresses	Specify an IP address range here. An Asterisk can be used as a wildcard: e.g. *192.168.*.** means all addresses beginning with 192.168

	A hyphen can be used to define a number range:
	e.g. *192-193.*.*.** means all addresses beginning with 192 or 193
	Multiple entries can be specified, separated with semicolons:
	e.g. *192.168.*.*;127.0.0.1;192-193.*.*.** means both of the above.
Access	Select one of:
	Grant – to allow access form this IP range.
	Deny – to block access from this IP range.

Aliases

Aliases are a very popular, although tricky, way how to organize files and folders of your FTP site. Using aliases in your FTP site is recommended and can be very useful. With right setting of aliases you can achieve better clarity and security of your server. After reading this, see also the **Hints** chapter further in this documentation.
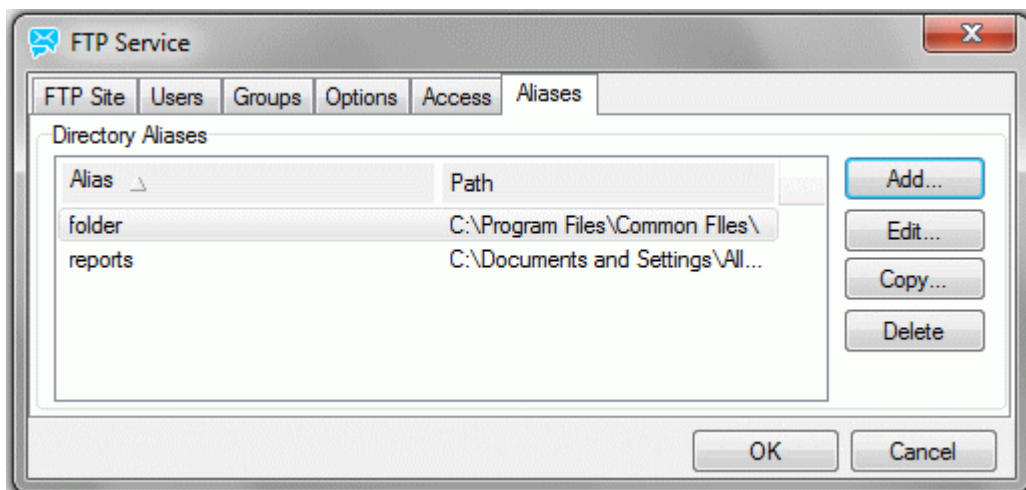

This feature lets you to define different paths for a particular folder. A user who accesses a folder in his/her FTP account site will access this folder but actually, he/she will be redirected to read a completely different one.

You can use both absolute and relative paths in the format shown on the image above.

Also, **you can use all path variables (*$$homedir$$, $$username$$, $$groupname$$, $$domain$$, $$email$$*** (the last two only in case you are system integrated)) when setting aliases. This can come extremely handy. Read more about path variables in the **Hints** section.

To add a new alias or edit an existing one, click the proper button. Dialog like this appears:
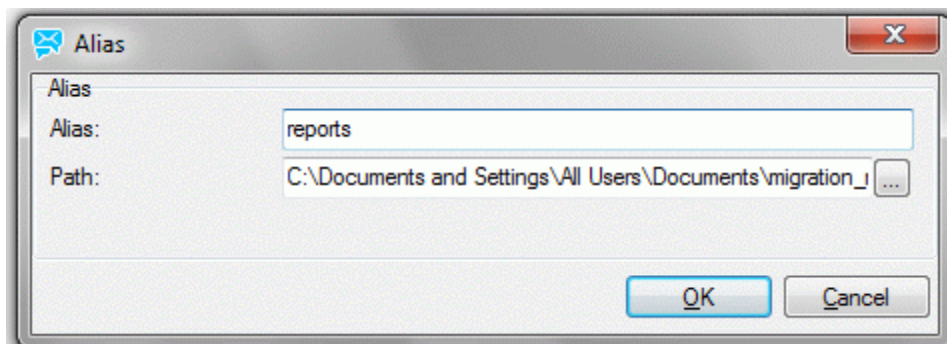
Field	Description
Alias	A relative path from root folder to the one whose accesses should be redirected somewhere else.

|	
Path	Where the accesses are redirected to. Can be relative or absolute path.

Synchronization Tab

Server synchronization is a comprehensive feature for scheduled automatic file or directory synchronization. It is ideal for automatic file or directory backup and mirroring.

Synchronization differences:

- new folder

- various file name or extension

- various time and/or date of creation (modification)

- various size

See also the **Hints** section in **FTP** documentation for example how to live backup your mail folder.
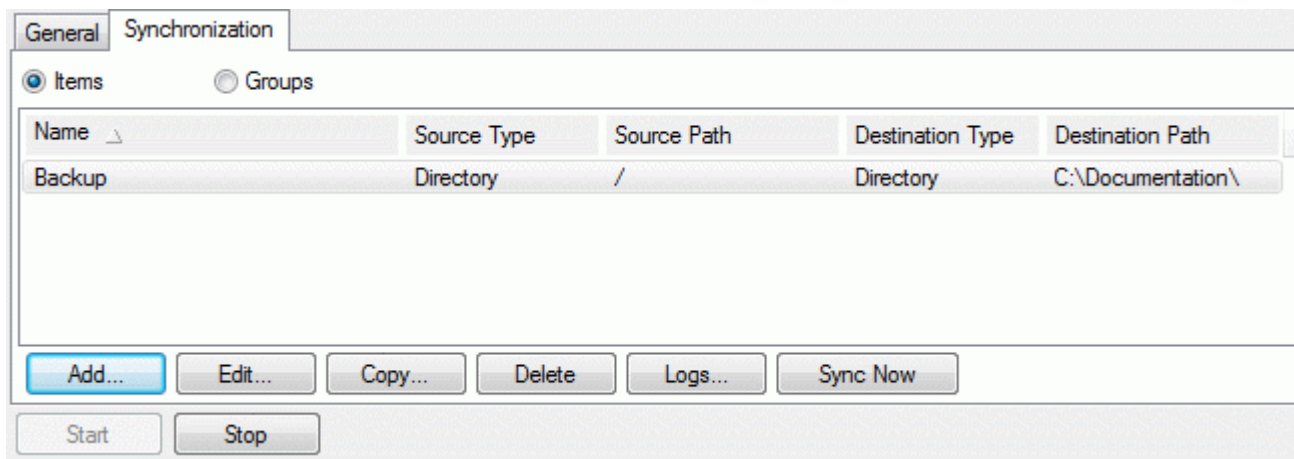
Button	Description
Items	Select **Items** to have shown a list of all synchronization items.
Groups	Item groups can be defined (within the **Synchronization** dialog – **Group** field – see bellow). Select **Groups** to have shown a list of synchronization groups.
	This allows you to perform mass synchronizations (by clicking the **Sync Now** button).
Add	Click the button to add a new synchronization definition. The **Synchronization** dialog opens.
Edit	Select a synchronization definition and click the button to edit its settings. The **Synchronization** dialog opens.
Copy	Select a synchronization definition and click the button to perform some minor changes and save a new (similar) definition. The **Synchronization** dialog opens.
Delete	Select a synchronization definition and click the button to delete it.
Logs	Click the button to have shown a synchronization log file – provided that it is defined under the **Synchronization** dialog – **Log File** field (see bellow).
Sync Now	Click the button if you want to perform synchronization right now. In the case an item or group is selected, its log file is shown.

Field	Description
Description	Identification of this task in synchronizations list. Enter some descriptive text.
Log File	Path to the file that logs synchronizations. Click the "**...**" button to select this file. The recommended file format is *.txt*. If you click the **Sync Now** button (**FTP Service – Synchronization**), the log file opens – you can watch the synchronization progress.

Synchronization	▪ **One-way simple** – synchronizes all new files and updates existing ones to *Destination*. This option does not delete anything in *Destination* so it can be used to merge different storages. In the case a file is deleted in *Source*, it stays in the *Destination*.
	▪ **One-way clone** – creates a complete clone of *Source* to *Destination*. Extra files in *Destination* that were not found in *Source* are deleted. Includes folders and directories.
	▪ **Two-way** – a full two-way synchronization. Tracks all changes in both *Source* and *Destination* and reflects them back to the other. First synchronization merges all folders and files and other ones track changes and perform them in a proper storage. Delete a file in *Source* and the file will be deleted in *Destination*. Add a directory to *Destination* and it will appear in *Source*.
Recursive (Synchronize subdirectories)	If enabled, all subdirectories will be synchronized too.
Type	▪ **FTP**: Backup your IceWarp FTP Server. This is the most common usage.
	▪ **Directory**: Synchronize from some local or network directory.
Server	Specifies a source server name.
Username	Username used to login to this source server.
Password	Password used to login to this source server.
Directory	Remote relative directory path. *Uses slashes – /*
Ignore List	Enter regexes with file names that you want to ignore when the directory is synchronized. I. e. these files will not be copied into the destination directory. E. g.: *\.db$*– all files with the *.db* extension are ignored.
File Check	This feature allows checking whether the intended synchronization is directed to the right external device mapped as a computer drive. This is confirmed by a specific file within the device. It is possible to check only a file existence or (optionally) even a file content defined by regex. In the case the file is found, synchronization is started. Syntax: *<FilePath>=[<Regex Content>]* Example: *y:\my_device.txt* (This example does not use regex content specification.)
Destination: Type Server Username Password Directory Ignore List File Check	See the appropriate field description for *Source*. Where comes on force, substitute "source" with "destination".
Schedule	Select days of week and use the radio buttons to set frequency of synchronization process.

Recommended Clients

We recommend the following client for use with IceWarp FTP Server.

- **FileZilla** – available from ***filezilla-project.org***. This is a free multi-platform FTP client with an equally rich set of features.

FTP Hints

In this chapter, some useful and helpful advices, hints and tips are described. Using this information can simplify and speed up management of your IceWarp FTP Server.

Send NOOP command

New tag <SENDNOOP>0</SENDNOOP> was added to ftpserver.dat.file from v11.4.1. You can select now from the option 0 or 1 as value to enable/disable Send NOOP command. Value 0 is setup by default.

Path Variables

You have various path variables available. You can use them in **home directory**, in **path permissions** settings and make **aliases** for them.

Path Variable	Description
$$username$$	Username of currently logged user is stored here.
$$groupname$$	Name of the group to which currently logged user belongs.
	NOTE: If this user is a member of more groups, just the first group in the list is used.
	E. g.: John Doe is a member of three groups – Developers, Support and Documentation (in this order). Here he is treated as a member of Developers.
$$homedir$$	Stores path to mailbox folder of currently logged user.
$$email$$	Usable only if integrated with the system contains the email address of the user.
$$domain$$	Usable only if integrated with the system this path variable contains domain name of the currently logged user.

Example

This setting will allow to have separate groups entering separate folders on your computer with one setting only.

Warning: User vs. Group

Path permissions and options specified for an individual user **always override** settings of a user as a member of some group! Do not forget about this. This also means you can selectively set different options for a particular user of any group.

For example, you want to give an administrator of a domain unlimited FTP access, so you have to specify these settings for this special user individually upon the **Users** tab.

Tip: System Integration Group

It is very useful to create a group of IceWarp Server system users. Such a group creating will easily let you link email server and IceWarp FTP Server.

Users in this group use their email account username/password combinations also for accessing the FTP site.

To create such a group, navigate to the **Groups** tab and add a new group like this:
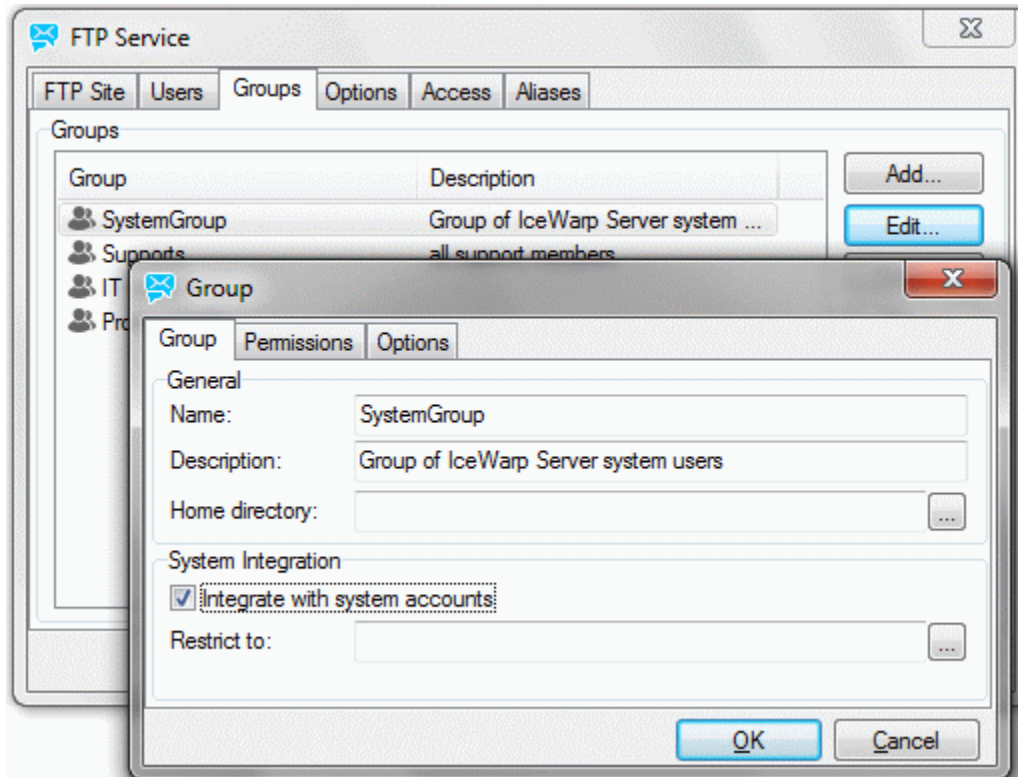
Do not forget to enable the ***Integrate with system accounts*** feature. If you do not fill in the ***Restrict to*** filed, this group will contain all IceWarp Server users.

If you smartly set options to be the mostly suitable for you, this is a powerful feature to handle and integrate email and FTP accounts.

If you do not want to have all users in one group, e. g. you want to restrict it to a specific domain or users, just fill in the ***Restrict to*** field. Multiple domains and users are supported separated with semicolons.

Tip: Effective Usage of *$$username$$* Path Variable

If you simply want every user to have a separate folder on your server, you can do it this way:
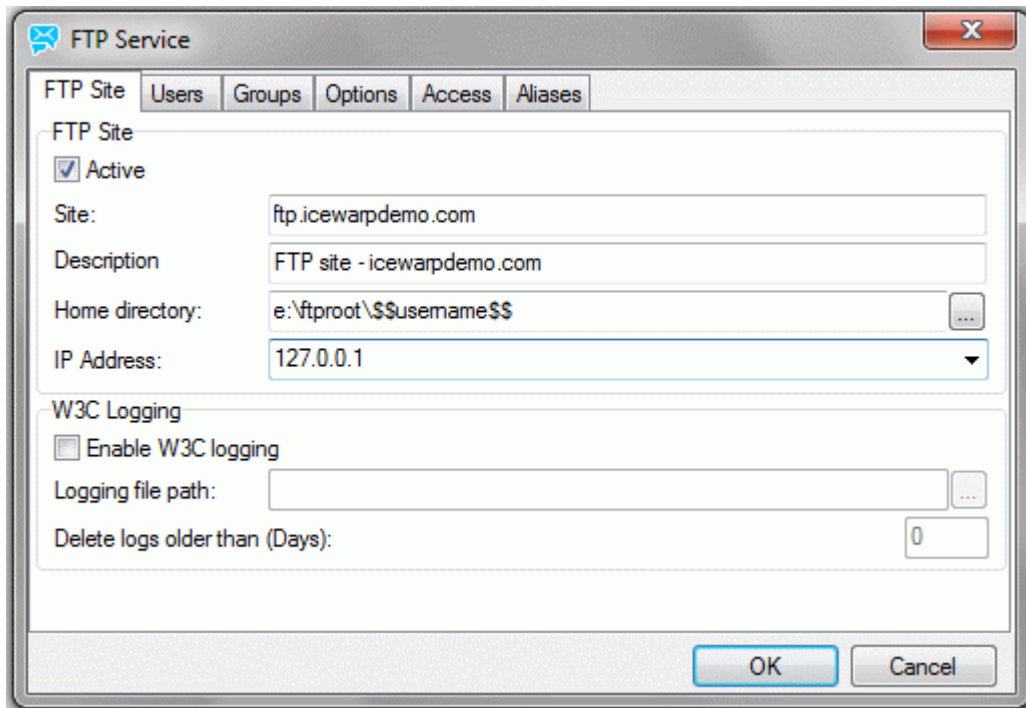

- Now every user that logs into his/her account will be automatically directed into their folder.

- For first-time loggers, folder is automatically created by IceWarp FTP Server. This applies also for anonymous account.

- It is recommended that you set the proper path permissions and maximum directory size for various types of users accounts under **User – Path Permissions/Options** or **Group – Path Permissions/Options**.

When you, as a server administrator, navigate to the **C:\Users** folder, you will see folders named *$$username$$*.

Tip: Server Sync – Live Backup of Mail Folder

It can be very useful to backup a mail folder. By setting IceWarp FTP Server as on the picture below, users will access directly their mail folders (path variable **$$homedir$$**).
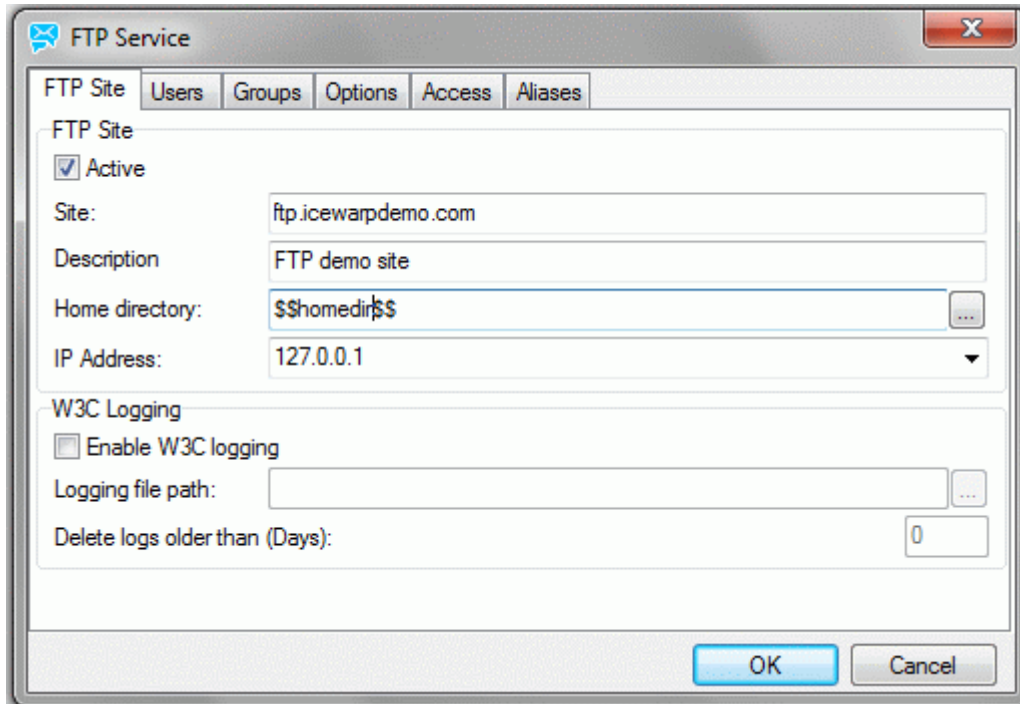

Navigate to the **Synchronization** tab, add a new task and set it to values such as these:
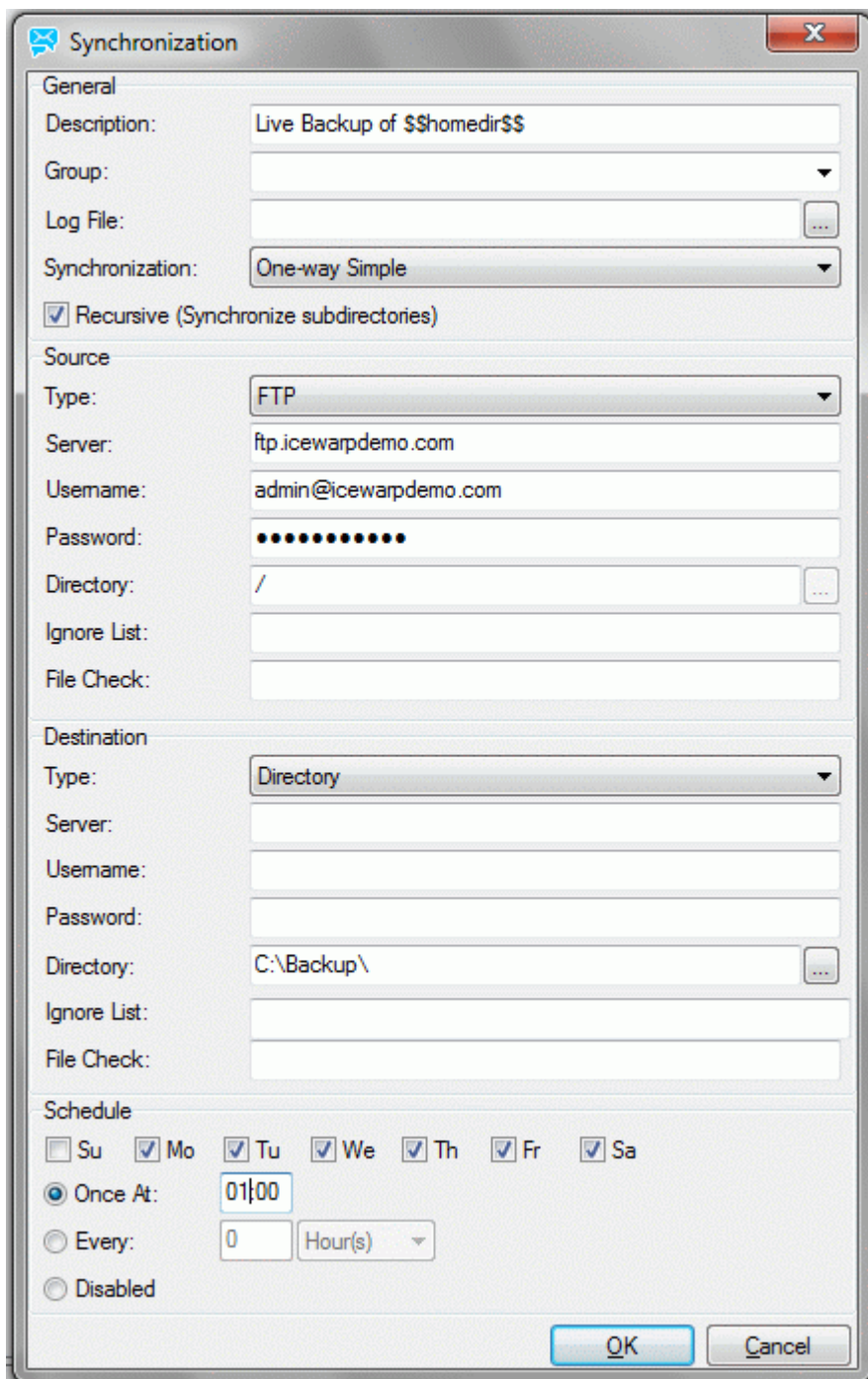
Now the server synchronization feature will backup the whole email folder (also subfolders – the **Recursive** check-box checked) of user account **admin@<domain>** to the local **C:\BackUp** directory.

Synchronization process will be performed once every day (except for Sunday) at 01:00 as set in the **Scheduling** option.
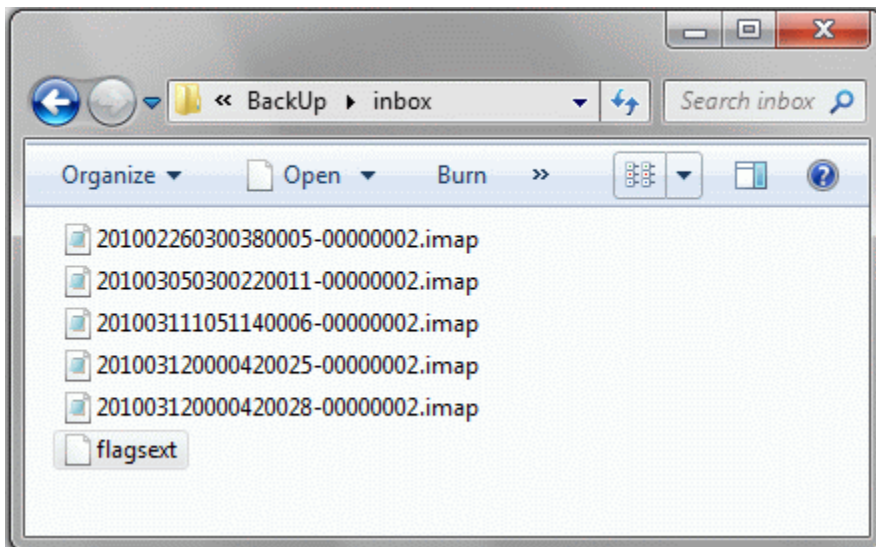
If you will access FTP site as admin@<domain> now, you will see the content of your email directory.
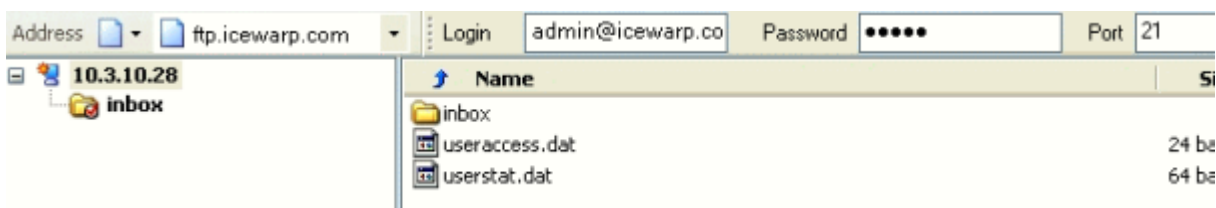
After synchronization (at 01:00, or pressing the **Sync Now** button) in the local **C:\BackUp** directory.
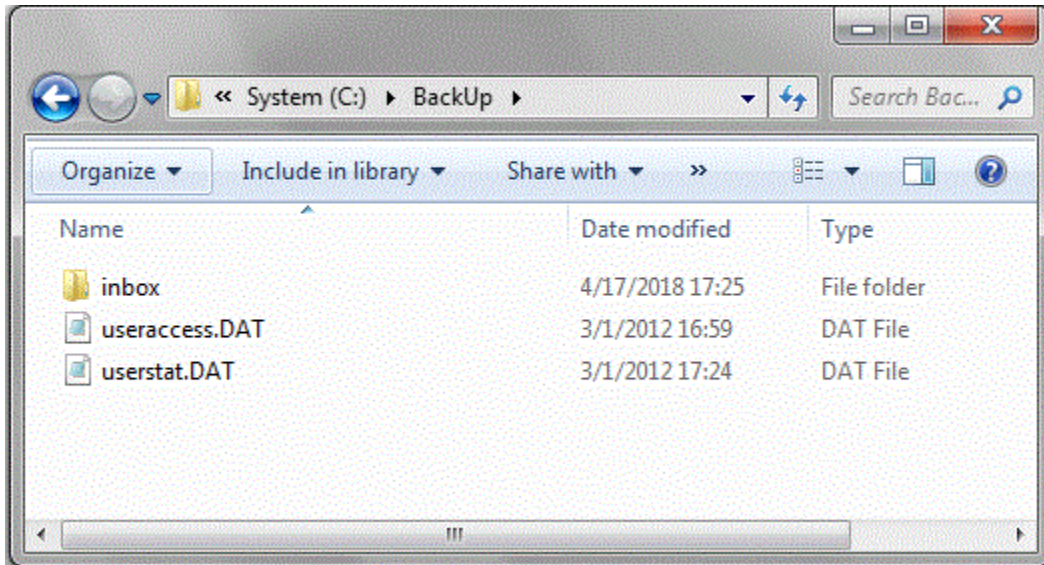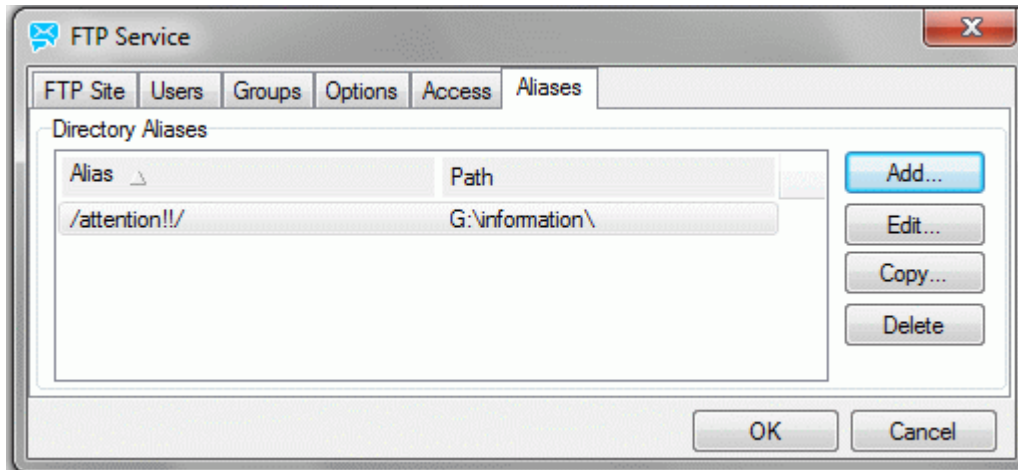
As you can simply check, also folder **\inbox** is synchronized.

Tip: Aliases – Globally Inform Users of Particular Group

This is useful when you want to inform or notify all users of a particular group of your IceWarp FTP Server. For such a purpose, you will include a folder or file into all FTP user accounts listed for this group. To do that, create an alias like this:

Locate the message or announcement into your local **G:\information** folder.

Now, to add this directory to all user accounts, simply add this alias into path permissions of a group or users you want to notify.
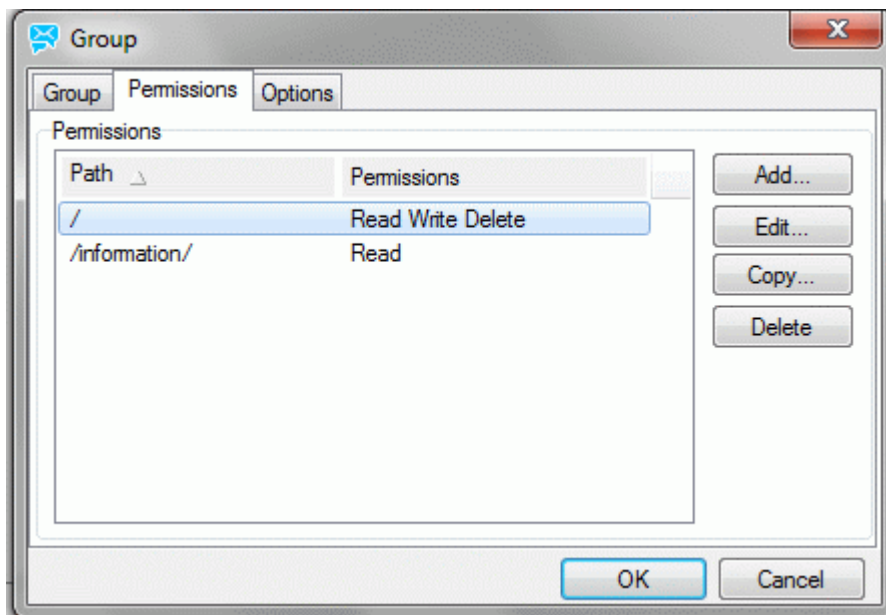
Users of your group will see a new read-only folder called **attention!!** in their home directories.