

Windows 95
Windows NT

NetSnap

The cool WebCam software

User's Guide

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NetSnap

V 1.1

User's Guide

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Quick start

Thank you for purchasing NetSnap. We are confident that you will enjoy the many features offered by NetSnap. Please add your your WebCam site to our WebCam search engine (<http://www.netsnap.com>) - we are always interested to see what great ideas you will come up with!

This section is intended to guide you through starting NetSnap for the first time. We suggest you study the remainder of the manual to familiarize yourself with the features offered by NetSnap - but if you absolutely can't wait, go ahead and follow the steps in this chapter to get started with NetSnap.

Before you get started

Things you must have

- A Windows 95 based computer system.
 - A camera that is compatible with Video for Windows (such as the Connectix QuickCam, the Digital Vision ComputerEyes, the Panasonic Egg-Cam, or the Best Data Image capture board).
- or
- A Snappy video capture device from Play Inc. running version 2.1 or later version of Snappy software. The patch to upgrade from 2.0 to 2.1 is available on the Play web site at <http://www.play.com>.

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- A dial up or LAN connection to the Internet. If you are using a dialup service, it must be reachable through the Windows 95 Dial-Up Networking feature. Your connection should be routed so that the computer is visible to the Internet.

Installing NetSnap

If you are installing from the disk set use the following procedure to install NetSnap:

1. Place disk 1 of 2 into your Floppy drive.
2. Click on the Windows 95 Start button and select the RUN option.
3. Specify the command **A:\SETUP**. If your floppy drive is not drive letter A then adjust this command to suit your system.
4. Follow the instructions given on the screen.

Running NetSnap for the first time:

1. Start your Internet connection in the usual manner (if you have a permanent LAN connection to the Internet you do not need to do this).
2. Start NetSnap by double clicking on the NetSnap program icon, or from the Windows Start menu.
3. When NetSnap starts for the first time, it displays the Setup wizard dialog. On the first page you will be prompted for your ID number. Enter the ID number from the disk package sticker, or one obtained from PeleSoft when you purchased NetSnap.

If NetSnap displays an error message it is most likely because it was not able to connect with your camera. Make sure that there is no other application running that blocks the camera, and make sure that your camera is plugged in, turned on, and working properly.

4. Click the **Next** button and enter your First Name, Last Name and your E-mail address in the appropriate fields.
5. Click through the various option sheets by clicking on the **Next** button on each sheet until you reach the Registration Sheet. Here the next button changes to read **Finish**. If you feel comfortable in changing some of the settings you can do so now. You can change all of these options at a later stage.
6. Click the Finish button on the Registration sheet. NetSnap will now connect to the server and obtain a unique ID number for your copy of NetSnap, or register the ID number you specified on the first sheet.
7. When registration is complete, you will be presented with the Registration confirmation box which will display your License Number. Make a note of your License Number and keep it in a safe place. You may need this number if you have to reinstall NetSnap.

8. Click the Start button on the NetSnap toolbar: 
9. You should see the message "HTTP: Service started" in the Server activity box.

If you get an error message saying "**Unable to start http server on specified port**" it is most likely because you already have another web server (for example your web authoring package, such as FrontPage, may include a local web server) . If this is so, click on the Options, Server, Services menu commands and change the HTTP Port Number to an unused port number, such as 81 or 82.

Once your HTTP service is started, go to the next step.

10. Start your Web browser browser (such as NetScape or MS Internet Explorer) and point it to the URL **http://localhost**. If you specified a port number other than 80 in step 9 above you need to put in as part of your URL such as **http://localhost:81** if you used port 81.

You should now be viewing the supplied sample pages.

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Consult the remainder of this documentation to find out how to place images on your web page and how to view your web-cam directly (without using a web page).

Introduction to NetSnap

What is NetSnap?

NetSnap is a Windows 95 application that allows you to provide video images to other users over the Internet. Typical NetSnap uses include:

- Providing a captured video picture from a camera connected to your computer and allowing this to be viewed on your homepage.
- Automatically dial up your Internet account each weekday at 7am and providing pictures from the family breakfast table to grandparents across the country for 15 minutes.
- Transferring images taken with a camcorder of a new product line in field operations to the company headquarters.
- Allow friends around the globe to view your graduation party using their Internet browser and your web page.
- Allow parents to view the activities at their child's daycare via the Internet.
- Whatch your pet at home from work.
- Promote a business with live images from the business location.
- Any many, many more applications.

Please let us know of how you use NetSnap! Register your WebCam on our lookup server located at <http://www.netsnap.com>.

What does NetSnap do?

NetSnap captures an image from a camera connected to your computer and provides that image to users on the Internet for viewing with their web browser. NetSnap can provide the image to anyone who has access to the Internet. Images may be static, or dynamic (self updating). You can define a caption along with a time and date stamp that is overlaid on each image.

NetSnap provides the image to other users, either by acting as a web server itself, or by transferring the image via FTP to another computer that acts as your web page server.

NetSnap has a built-in scheduler that can automate its activities at times you define. NetSnap can use your Windows defined dial-up connections to perform image transfers, or use a dedicate LAN connection to the Internet.

What do I need to use NetSnap?

- A computer running Windows 95 or Windows NT 4.0.
- A Video input device. Examples are a Connectix QuickCam, a Panasonic EggCam, the Digital Vision ComputerEyes, or a Snappy video capture device. NetSnap uses the Microsoft Video for Windows interface and should thus work with any camera or capture board conforming to that standard.
- A dial-up or direct internet connection. The dial-up connection should be reachable through the Windows 95 Dial-Up networking option.

How do I register NetSnap?

You register NetSnap by using the Registration Wizard from the Help Menu.

Any time you upgrade NetSnap, for example from an eval version to a full version, or you increase the number of supported streams, re-run the Registration Wizard.

After you run the Registration Wizard, NetSnap will contact the lookup server and obtain its new settings as registered for the ID number assigned to your copy of NetSnap.

What do other users need to view the images?

Other users will be able to view your images using almost any Internet browser. In most cases you will put a link to the current image in your web page. Whenever another user accesses your web page, they will get the latest NetSnap image from your computer.

What makes NetSnap so cool ?

NetSnap has quite a few features that make it easy to place live images onto your web pages:

- Locate Server - solves the problem of having a dynamic IP address for each login
- On Demand Scaling - capability to send a small picture faster
- History Images - store and access past images. See changes over time
- Push Capability - let NetSnap update the image on your web page without the need to reload
- Java based image update for browsers that do not support push streams
- Lead-in and Trailer images with Push Stream - allow you to place ads or notices in your video output
- HTTP Password Protection - only known users can view images
- Scheduled dial-up - perform NetSnap image uploads and connections automatically.

Do I have to be connected to the Internet all the time?

No. However, other users can only view live pictures while you are connected to the Internet at the same time as they are viewing. NetSnap provides the ability to announce whether you are currently on-line or off-line. If you are off-line, anyone trying to view your live image would be shown a picture indicating that your camera is currently off. You should specify the picture to be shown by setting the URL to your choice of image on the General options page. The image should be located on a web server that is always available.

Alternatively, you could have NetSnap automatically transfer an image periodically (once an hour, once a day, etc) via FTP that the users will see until you transfer a new image. In this case you are only connected to the Internet while you transfer the periodic image.

Can I look at the video images myself?

Sure. In addition to watching the video preview window in NetSnap, you can view the images just like any other user could. This allows you to see how your caption, time or date stamps look in the final image. See the section on direct viewing for details on the location to open with your Web browser.

How does NetSnap work?

NetSnap has a web server and FTP client built into it. When you start the NetSnap server, its built-in web server capability allows other users to connect directly to NetSnap from their web browser. NetSnap then provides the user with an image that is captured from the camera. In cases where you do not have a fixed IP address assigned to your computer (this is the case with most dial-up internet service providers), NetSnap may use the locator service to redirect browsers to your computer by announcing its current IP number to the locator.

What is the Locator Service?

When the Announce to Locator Service option is enabled, NetSnap will send a message to the central NetSnap lookup computer (lookup.netsnap.com) each time the NetSnap server is started. This machine then knows what IP address your computer has for the current session. When other users access your computer, they indirectly go thru the central NetSnap lookup server which automatically forwards them to your computer. When you exit NetSnap, the central lookup server is contacted so that users can be made aware that you are now offline.

Do I need to use the Locator Service ?

No. As a matter of fact, if you have a busy web site it would speed up the image delivery considerably if you obtain a fixed IP number from your ISP. Ask your ISP about setting up a fixed IP number for your dial-in account. Once you have a fixed IP number, disable the Announcer option on the Services configuration page.

How can I tell when someone looks at my current image?

The HTTP activity indicator will blink red each time someone accesses your NetSnap web server. There will also be an entry added to the Server Activity area of the NetSnap window telling you the IP address of the user accessing your image. Note that the activity indicators will remain gray unless the server is activated they will indicate activation by turning green. Transfer of data will be indicated by a red blink. A log file is kept in the NetSnap program folder which lists any activities performed through NetSnap.

Can I allow only certain people to view my NetSnap images?

Yes, you can activate password protection so that only users who know the defined username and password can access the NetSnap images via the NetSnap web server.

Why do I need to register my e-mail address?

When you run NetSnap for the first time, it will prompt you with the setup wizard. One section of the wizard will ask you to register your e-mail address. This is necessary so that NetSnap can obtain, a unique ID number for your copy of NetSnap. It is the ID number allocated to your copy of NetSnap which allows the **lookup** service to work properly.

PeleSoft will use the e-mail address to send you e-mail notifications of upgrades or to confirm your ID number. Your e-mail address is not given to any other party by PeleSoft.

Contacting NetSnap support

You can visit the NetSnap web page at : <http://www.netsnap.com>

For support send email to: support@netsnap.com

Before calling or e-mailing for support, make sure that you have checked that your camera hardware is working correctly, that your dial-up networking service is configured and functioning, and that you have searched through the online help for relevant information. Please list your NetSnap ID number in your support request message.

More information

A useful source for more information on NetSnap "How To", and tricks of the trade is the NetSnap web site. Especially in the Support section will we post

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updates, tricks, short cuts, and sample pages as they become available.

The NetSnap web site is located at : <http://www.netsnap.com>

Operation

How to start the camera server

You start the camera server by selecting the Start Server command from the Server menu or by clicking on the



Start button on the toolbar. This will start up the NetSnap server services on your computer. Depending on how you configure NetSnap, the start button will cause either the enabled services (HTTP, FTP) to start, or it starts the scheduler which in turn starts the configured services at the scheduled times.

The NetSnap web server (HTTP service) allows Internet users from around the world to view live images captured from the camera.

Viewing images on your browser

You can view images from the camera directly, or by referring to them on your web page. To view images directly you must be running the HTTP service on NetSnap. The HTTP service turns NetSnap into a mini web-server. You can also automatically upload the images to your web server via the FTP option in NetSnap.

Direct viewing of image without a web page

You can view the images from the camera on a web browser without having a web page by pointing your browser directly to the computer running NetSnap. The exact URL you point your browser to depends on whether you have a fixed IP number (such as when the camera is on an in-house LAN with dedicated Internet access) or if you have a dynamic IP number (one that changes).

You have a dedicated IP number

If you have a dedicated IP number, simply point your browser to the IP number allocated to the machine running NetSnap. If a DNS name is associated with the machine, you may use the name instead of the IP number. Examples:

```
http://192.82.51.223
```

```
http://mymachine.bigcompany.com
```

if you are using a port number other than the default port of 80, then you need to specify the port number as part of the URL as follows:

```
http://192.82.51.223:84
```

In the above example, NetSnap is configured to use port 84 of the HTTP service.

You have a dynamic IP number

In many situations, such as when using dial-up Internet access, your IP number changes every time you connect to the Internet. For this case, NetSnap provides the lookup service through a known server by the name of **lookup.netsnap.com**.

In this case you must enable the Announce to locator service option for the HTTP service (Options, Server, Services)

Open the Info dialog box (Help, NetSnap Server Info) for NetSnap and make a note of the URL displayed. Point your browser to the displayed URL and you should see the image from the camera on your browser. Examples:

`http://lookup.netsnap.com/000035`

or

`http://lookup.netsnap.com/000035/netsnap.jpg`

or

`http://lookup.netsnap.com/000035/netsnap.jpg?scale=50`

Note: You should realize that if you use the announcer features, your NetSnap ID could be typed in by anyone (even just by guessing) to see images from your camera. If you do not wish public access to your NetSnap images, take advantage of the password protection feature, or obtain a dedicated IP number from your ISP and disable the announcer service.

Placing NetSnap camera images on a Web page

To place a camera image on your web-page place an IMG tag at the location where you wish to display the image in your web page. A typical image tag would look like this:

```
<IMG SRC="http://lookup.netsnap.com/7100-0000-000035/netsnap.jpg"
ALT="NetSnap image" WIDTH="320" HEIGHT="240">
```

if you are using the lookup service. Or like this

```
<IMG SRC="http://127.0.0.1/netsnap.jpg" ALT="NetSnap image"
WIDTH="320" HEIGHT="240">
```

if you have a fixed IP number (replace 127.0.0.1 with your actual IP number),

or:

```
<IMG SRC="http://mymachine.big.com:81/netsnap.jpg" ALT="NetSnap
image" WIDTH="320" HEIGHT="240">
```

if you have a permanent LAN connection and your machine has been assigned an Internet name by your LAN administrator.

Important: Be sure to specify the WIDTH and HEIGHT attributes on your web-page as some browsers will not display the images properly without these attributes!

Some Web page Examples:

Here are some examples which demonstrate how to place NetSnap captured images on your web page:

- Example 1: Single Image, hit reload to refresh (HTML Source)
- Example 2: Smaller Image as link to full image (HTML Source)
- Example 3: Automatic scaling, saves user transfer time (HTML fragment)
- Example 4: Push server, lets NetSnap continuously update image (HTML fragment)

- Example 5:** Displaying History files from your web page (HTML fragment)
- Example 6:** Automatically updating images using Java push applet (HTML source)

Example 1: Web Page with Single NetSnap Image

Here is the HTML source to a simple web page that displays a NetSnap acquired image:

```
<html>
<head>
<title>Example 1 Single Image</title>
</head>
<body>
<center>
<h1>
This is example 1. You need to hit Reload in the browser to get an
updated/new image.
</h1>
We'll place an image link to the NetSnap URL that is displayed in
the Info box (displayed by clicking the Info button in NetSnap).
This will load an image from the camera every time this page is
displayed or refreshed with the browser reload command.
<br>

</center>
</body>
</html>
```

Example 2: Web Page with smaller NetSnap Image as a Link

Here is the HTML source that would make a simple web page that uses a NetSnap acquired image as a link. The image is displayed in a reduced size. The image is a link that when clicked will display the full size image (or any other URL).

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Notice the use of the scale option, which reduces the size of the image transmitted from NetSnap.

```
<html>
<head>
<title>Example 2 Smaller Image as Link</title>
</head>
<body>
<center>
<h1>
This is example 2. You need to hit Reload in the browser to get an
updated/new image.
</h1>
We'll place an href around an image link to the NetSnap URL that
is displayed in the About box (from clicking (Help, About) in
NetSnap). This will load an image from the camera every time this
page is displayed or refreshed with the browser reload command.
When the user clicks on the image, a new web page will be brought
up using the URL defined in the href tag. (In this case ex1.html) .
<br>
</center>
<h3 align="center">Live shot from the PeleSoft web-cam</h3>
<p align="center">
<a href="ex1.htm"></a></p>
<p align="center">
This camera is located in the offices of PeleSoft.</p>
<hr>
</body>
</html>
```

Example 3: Scaling Image from NetSnap web server

The image requested from NetSnap can be provided in a scaled down format. This reduces the amount of data sent from NetSnap and can provide for a quicker overall web page update (at the cost of image size). To request a scaled down image, append the option **scale=xx** where xx is a scale factor from 10 to 99. To the URL of the NetSnap image.

Placing images on a Web page

Valid ranges are 10 to 99. 99 indicates 99 percent of full size, 50 indicates half size and so on. The image is scaled relative to the size of the image obtained from the camera.

```
<html>
<body>

</body>
</html>
```

Note: You will need to adjust the **WIDTH** and **HEIGHT** tags to represent the actual width and height of the transmitted image. In the case of a scale factor of 50 the image will be 50% of the size of the base image size (usually 320 x 160). In this case the **WIDTH** and **HEIGHT** options are computed as follows:

WIDTH: 50% of 320 = 160

HEIGHT: 60% of 240 = 120

Be sure to compute these values correctly so that the browser does not try to scale images.

Example 4: "Push" capability of NetSnap web server

NetSnap can provide a continuously updating image to a web page without the need (and associated overhead) of the browser requesting periodic updates. This server "push" technology currently only is available to users using a Netscape Navigator (version 2 or later) web browser. To access this capability the `push` keyword is used as the filename portion of the URL for your NetSnap server. Example:

```
<html>
<body>

</body>
</HTML>
```

To Push a scaled image use a format similar to:

```
<html>
<body>

</body>
</html>
```

Note: Unless you have a very fast Internet connection and a fast capture board, we recommend you use a scale factor of 50 to reduce the size of the image and thus the amount of data that needs to be transferred.

Example 5: Accessing NetSnap History Images via Web

If the NetSnap Image History feature is enabled, image history files can be accessed via the NetSnap web server. Append the image history number to a valid NetSnap URL.

- 0 indicates newest history image,
- 1 indicates next newest, and so on.

NetSnap will take care of figuring out at the time of access which actual filename is the newest and provide that image to the browser. Example:

```
<html>
<body>

</body>
</html>
```

Example 6: Automatically updating images using Java push applet

The push-server feature of NetSnap is an efficient method to allow self-updating images on a web page. However, not all browsers support the push-server method. For Java enabled browsers you can use the push.class Java applet to cause images to be refreshed continuously.

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The push class needs to be loaded from a web page on the NetSnap web server in order to function correctly. The example file **push.htm** supplied with NetSnap (located in the NetSnap data folder) will load the push.class Java applet and present visitors with self updating images. From your web page you would link to the **push.htm** file using one of the following methods:

With a static IP number:

```
<html>
<head>
<title>Link to live video</title>
</head>
<p>
<a href="http://mymachine.bigcompany.com/push.htm">
Click here to view live video feed</a></p>
</body>
</html>
```

With a dynamic IP number:

```
<html>
<head>
<title>Link to live video</title>
</head>
<p>
<a href="http://lookup.netsnap.com/7100-0000-000035/push.htm">
Click here to view live video feed</a></p>
</body>
</html>
```

You can edit the push.htm file supplied with NetSnap to suit your preferences. Notice the portion of HTML in push.htm which loads the push.class Java applet:

Placing images on a Web page

```
<applet code="push.class" align="baseline" width="160"  
height="120" name="push">  
<param name="delay" value="2">  
<param name="max" value="20">  
</applet></p>
```

Push-Class parameter

The following parameters may be passed on to the push.class applet:

Delay	- the Delay between individual frames in seconds
max	- the maximum number of frames to display

The default file supplied with NetSnap will serve up to 20 images with a delay of 2 seconds between each image.

Note: Do not try to load the java applet from a web page that is not located on the NetSnap server. Doing so will prevent it from working properly due to network security features built into most Java browsers.

Viewing FTP uploaded Images

Images that have been uploaded by NetSnap to your web server (usually located at your ISP) reside in the configured directory (default is home directory) of the FTP server with the configured filename (default is netsnap.jpg). FTP uploading is configured on the Service options dialog box. (Options, Server, Services).

To view the uploaded image with a web browser depends on how your ISP has set up your web site. Usually you just refer to the image file in your IMG tag on your web page:

```
<IMG SRC="http://webserve.isp.com/netsnap.jpg">
```

If your FTP directory is not accessible by your ISP's web server service you may have to specify that the image is obtained using FTP. In that case use a URL may be similar to:

```
<IMG SRC="ftp://webserve.isp.com/netsnap.jpg">
```

Or

```
<IMG SRC="ftp://webserve.isp.com/~username/netsnap.jpg">
```

Check with your ISP on how to refer to images or web page files uploaded via FTP.

Note: In all these example URLs that contain the machine name *webserver.isp.com* should be replaced with the name of the server the image is FTP'd to, and username should be replaced by your login name on that server. If you have placed the image file in a different directory or changed the default filename, those parts of the example URLs should be adjusted also.

The NetSnap web server

NetSnap has a built in web server, not only for serving images, but also to serve simple web pages, pre built images and icons (such as .GIF files,), and java applets.

Through the use of the web server capability of NetSnap, you can customize your NetSnap server for many different types of applications.

This section explains some of the default HTML files provided with NetSnap. You may use these as they are, or customize them by modifying or writing your own pages.

The NetSnap webserver HTML root directory (the folder in which all the HTML files and images served by NetSnap are kept) is the **data** folder underneath the NetSnap program folder. Unless you installed NetSnap in another directory, you can find this folder in:

C:\Program Files\PeleSoft\NetSnap\data

The supplied files in this folder are:

Filename	Purpose
INDEX.HTM	Default web page. This page is served if you reference your NetSnap web server without any specific file information.
NSPUSH.HTM	Sample page using Push-Server technology to continuously update the camera image. This works with the NetScape Navigator browser.
PUSH.HTM	Sample page using the Java applet push.class to obtain a self updating stream of images.
PUSH.CLASS	The java applet used in PUSH.HTM

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OFFLINE.GIF	A GIF file you can place on your web page and reference as the offline image when NetSnap is not running.
BUSY.JPG	The image displayed when the server serving more streams than it has available.
LEADIN.JPG	Default image used as push-server leadin image.
TRAILER.JPG	Default image used as push-server trailer image.
NSBUTTON.GIF	A button you can use on your web pages to show that your camera images are powered by NetSnap. Please link this button to http://www.netsnap.com .

The NetSnap webserver is not intended to be a full web server, even though it is tempting to use it as such. For frequently visited sites we recommend you use a full web server or web hosting service and leave the NetSnap web server for the purpose it is intended for, to help in serving captured images from your camera.

Activity and Status Monitoring

NetSnap provides activity and status monitoring through a Status list box which is updated in real-time and a log file which maintains a record of activity.

Status list box

The Server activity area displays events as they occur in a list box.

Also displayed are 3 pseudo LEDs that indicate the current activity on the HTTP, FTP, and Announcer servers/clients. The activity is indicated by three states:

- Gray indicates item is disabled
- Red indicates item is enabled but not active

Activity and Status Monitoring

- Green indicates item is currently active

The Status message indicates the current action of NetSnap such as:

- Idle
- Connecting to server
- Connected to server
- Announcing online
- Announcing offline
- Connection active
- FTP Upload in progress

Log File

NetSnap maintains a log file called **NETSNAPLOG** in the NetSnap program folder. On a default installation path this is the folder:

```
\Program Files\PeleSoft\NetSnap
```

The log file maintains a log of activity on your NetSnap server. This file can grow very large and you should delete it from time to time.

NetSnap HTML Reference

The HTTP web server built into NetSnap supports several options that can be appended to the URL used to reference a NetSnap image. This section of the manual is not intended to be a HTML reference, but a reference for NetSnap specific features. If you are not familiar with HTML we suggest you obtain a book on HTML. There are many good publications available in almost any major bookstore.

The general concept of placing live images on a web page is to use an IMG tag with its SRC parameter set to the URL of the camera. In its simplest form an example of such would be:

```
<IMG SRC="http://mymachine.mydomain.com/netsnap.jpg">
```

If you do not have a static IP number (such as when using a dial-up connection) you can take advantage of the announcer service provided with NetSnap. In that case the URL to the image from the camera references the lookup server (which has a published IP address and name) with your NetSnap ID as a filename component of the URL. Example:

```
<IMG SRC="http://lookup.netsnap.com/7100-0000-000035/netsnap.jpg">
```

Specifying options

As part of the URL NetSnap can accept several options which are listed in this chapter.

Option specifications may be appended to the URL in order to affect how camera images are sent to the browser.

Options are appended to the URL by seperating them with a question mark '!':

```
delay=50?scale=10
```

delay=xx

The amount of delay (in seconds) between images when using the Push Server option.

Range: 0 - 60 seconds

Example:

```
http://lookup.netsnap.com/7100-0000-000035/push?delay=2
```

scale=xx

The amount by which to scale down the size of the image.

Range: 10 - 99 per cent

Example:

```
http://lookup.netsnap.com/7100-0000-000035/netsnap.jpg?scale=50
```

The scale factor is a percentage of the base image size. In most cases the base size is 320x240, in this case a scale factor of 50 would yield an image of 160x120 (half the base size).

Some common examples

The following examples demonstrate some of the features of the NetSnap web-server:

Show NetSnap home page

Displays the file INDEX.HTM which is located in the NetSnap data directory

Example:

```
http://lookup.netsnap.com/7100-0000-000035
```

Example:

```
http://mymachine.big.com
```

Access History Image

By appending a number to the base URL of the NetSnap server, a history image is transmitted. The range of the number is 0 to the maximum history file number you have configured the NetSnap history feature for.

Example:

```
http://lookup.netsnap.com/7100-0000-000035/0
```

Note: Can not be combined with other options

Transmit Live push feed

NetSnap can provide self-updating images, referred to as “push-feeds”. You must have the Push-Feed option enabled on the NetSnap Services Push Stream options sheet. There also various other parameters which affect how the Push-Stream feature performs on that configuration sheet.

To serve a push feed, simply append the word **push** to the base URL of the camera.

Example:

```
http://lookup.netsnap.com/7100-0000-000035/push
```

Example:

```
http://mymachine.big.com/push?scale=40?delay=4
```

Notes: can be followed by scale and/or delay options separated by ? character.

Scale down image size

Often it is desirable to scale down the size of the image, this yields faster image updates as the amount of data to be transmitted is less. To scale down the size of the image from its base size (in most cases the base size is 320x240), append the scale option to the camera image URL:

Example:

```
http://mymachine.big.com/netsnap.jpg?scale=50
```

The range for the scale option is: 10 to 99 indicating 10 percent to 99 percent of full size image.

Configuring NetSnap

There are many configurable options in NetSnap. This is what makes NetSnap suitable for many different applications and preferences. Please take some time to study the various options so that you can take full advantage of the NetSnap features.

Use the Options | Server command to bring up the NetSnap property sheets. Here you may configure the following items:

- General
- Connection
- Video
- Services
- Push Stream
- Schedule

Note: We suggest that you Stop the NetSnap server while configuring items.

General Options

On the General Options sheet you will find various options that affect the general operation of NetSnap.

Update Preview Video

Check this to let NetSnap update the video preview window on a regular basis determined by the Preview Interval.

Preview Interval

The Preview Interval defines the time (in seconds) between updates of the image from the video source.

Note that on some cameras (especially those which use the Parallel port) the preview feature represents a high overhead on the CPU.

NetSnap will switch off the preview feature when it is not the currently selected window or while running in service mode.

Note: The Snappy device may not be able to update images more often than approximately once every 5 seconds. The exact number depends on the type of system you are using.

Background Preview

Enabling the Background preview option on the General Options page causes NetSnap to capture an image from the camera on regular intervals, even when NetSnap is a background window or running as a service.

This option should be enabled when using cameras which adjust their brightness settings during capture. Typically, cameras which use the parallel port (rather than a dedicated capture board) exhibit this behavior. An example of such a camera is the popular Connectix Quickcam.

Register as Service

When the Register as Service box is checked, NetSnap will run as a Windows service when the Auto Start Services feature is enabled. In this mode, NetSnap shows up in the application tray on the taskbar.

Services mode may also be entered by selecting the **Yes** option from the Exit menu (Server, Exit). NetSnap will continue to run even if the user logs out of Windows. Double click on the NetSnap icon in the application tray to bring up the full size NetSnap application. Note: The Service mode can only be used on systems with a dedicated LAN connection.

Auto Start Services

When the Auto Start Services option is selected, NetSnap will start running the HTTP service or the scheduler immediately upon being run. This allows you start serving images without having to click on the start button.

If the Register as Service check box is also checked, it will place the NetSnap icon in the system application tray.

Image URL when Offline

The image that is shown to users browsing your web page, or trying to obtain a camera image from you directly, while NetSnap is not running.

You should make this URL point to an image on your web server that explains that your camera is currently offline.

You could also make this an image taken from NetSnap and uploaded via Flash FTP to your web server.

Your web pages must use the NetSnap lookup server to use this feature, and you must enable the announcer service for this option to be effective.

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Example offline image URL:

`http://www.isp.com/~username/gifs/offline.gif`

Home Page URL to publish

You may publish a link to your home page containing NetSnap images by placing the complete URL to your home page in this field and checking the Publish Home Page to public box.

This will allow public viewers to locate your home page on the NetSnap server.

When doing this you should also take advantage of the Image URL when offline feature, so that when NetSnap is not online visitors to your site will see an alternative image (such as one saying that the camera is currently off, or the last captured image uploaded via ftp (typically netsnap.jpg)).

Publishing Home Page to public

Enables publishing of the home page URL specified in the Home Page URL to publish option.

Connections options

NetSnap allows you to use direct LAN connections or Dial-Up connections to connect to the Internet. The best type of Internet connection is, of course, one that goes directly over your LAN. In that case you do not have to dial into the Internet, but simply use your Internet applications whenever you wish.

Most users, however, will use a Dial-Up connection to an Internet Service Provider (ISP) to gain access to the Internet. NetSnap uses the Windows Dial-Up Networking support to perform connection tasks to the Internet.

On the Connections property sheet you can configure:

- Use Direct LAN (TCP/IP) Connection
- Dial-Up Connection
- User name
- Password
- Redial on loss of connection
- Max. Redial attempts

Use Direct LAN connection

Checking the Use Direct Lan (TCP/IP) Connection box stops NetSnap from using dial-up networking to obtain a connection to the Internet.

When this box is not checked, a selection can be made in the Dialup Connection area of the dialog box.

Check the Use Direct LAN connection box if you have a direct LAN connection to the Internet, as is the case in most office or corporate environments.

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To use dial-up networking to your ISP, uncheck the box.

This option can also be enabled if a dialup connection is used, but NetSnap is not to dial the connection. In this case it is up to you to initiate the dialup connection prior to using NetSnap.

Dial-Up Connection Selection

If the Use Direct LAN (TCP/IP) Connection box is **not** checked, you can pick a dial-up connection for NetSnap to use to establish a connection to the Internet.

In addition to selecting which dial-up networking connection to use, you must also specify the User name and Password for the particular connection.

Dial-up Networking sessions are defined in your **Dial-Up Networking** folder in the **My Computer** folder of your Windows 95 desktop.

Important: In order for NetSnap to establish a link to the Internet, the User Name and Password entries must be correctly provided for both, your Dial-Up Networking definition and in the NetSnap Dial-Up Connection property sheet.

Dial-Up User name

The User name prompt on the Connections property sheet allows you to specify your user name for the selected Dial-Up connection.

The User name you specify should be the same name you specify when dialing into the Internet using the Windows Dial-Up networking feature.

Check with your ISP if you are not sure what your User name is.

Note: User names may be case sensitive

Dial-Up Password

The password required to establish an Internet connection through your ISP.

The password is case sensitive, be sure to specify the password exactly as required for your Internet Connection.

Redial on loss of connection

Checking this check box on the Connections sheet causes NetSnap to immediately redial the Internet connection if the connection is lost or can not be established.

Note: You must be using the Dial-Up networking driver 1.1 or later (version 1.2 is current at the time of writing) in order for the redial feature to work. The original dial-up driver supplied with Windows 95 will display a dialog on loss of connection. This is not desirable for unattended operation.

If you need to upgrade your dial-up networking driver for Windows 95, go to the Microsoft web site at <http://www.microsoft.com> and search for the file MSDUN12.EXE.

Max. Redial attempts

Set this to the maximum number of times NetSnap should attempt to redial a dial-up networking connection before giving up. The default value for is 20. You may set this higher or lower for your particular requirements.

Note: You must be using the Dial-Up networking driver 1.1 or later (version 1.2 is current at the time of writing) in order for the redial feature to work. The original dial-up driver supplied with Windows 95 will display a dialog on loss of connection. This is not desirable for unattended operation.

If you need to upgrade your dial-up networking driver for Windows 95, go to the Microsoft web site at <http://www.microsoft.com> and search for the file MSDUN12.EXE.

Video options

On the Video property sheet you can configure:

Video Capture Device:

- Microsoft Video For Windows
- Image Size
- Snappy 2.1

Text Overlay:

- Time Stamp Format
- Date Stamp Format
- Caption
- Position
- Color
- Background
- Transparent
- Choose Font
- JPG Factor

Microsoft Video for Windows

Choose this selection to use a Microsoft Video for Windows video capture device such as a Connectix Quickcam, Panasonic EggCam, Digital Vision ComputerEyes or other compatible cameras or capture cards.

The camera you use must be compatible with the Microsoft Video for Windows standard as defined for Windows 95.

Image Size (Video options)

The Image Size drop box allows you to select the base image size setting for images captured from the camera. Usually you would set this to 320 x 240 pixels.

Use the scale option to the URL referencing your camera on web pages to adjust the image size dynamically.

Valid settings are:

default	The setting supplied by the camera driver. IE: NetSnap will not try to set the image size, but leaves it to your camera driver configuration.
160 x 120	A small half sized image, 160 x 120 pixels.
320 x 240	Full sized image, 320 x 240 pixels (Chose this size for best results).

Note: If you are using the Snappy video capture device from Play Inc. then the base image size is fixed and can not be adjusted.

Snappy 2.1

Choose this selection to use the Play Inc. Snappy video capture device. The 2.1 version of Snappy software needs to be installed. (Upgrade from 2.0 to 2.1 patch is available on the play web site for download at <http://www.play.com>).

Snappy is an external palm sized device that connects to the parallel port of the computer. It is powered from a 9V battery. It is recommended that for **NetSnap** applications the 9V battery be replaced with a 9V battey eliminator such as those available from Radio Shack. (The estimated life of a Snappy 9V battery is approximately 600 snaps).

Check with your harware vendor for a compatible adapter so you will not damage the device!

If you are using a video camera, such as a Sony Handycam, you may have to remove the tape from the camera to prevent it from timing out.

Note that running a video camera with the tape in it (even if not recording to tape) for an extended period of time, may cause damage to the tape or the video camera

Always consult the directions and warnings of your camera manufacturer.

Time Stamp Format

Choose the format of the Time Stamp to be overlaid on the captured image that is provided by the FTP client or HTTP/Web server.

The Time Stamp is generated at the time the image is served to the end user. The various formats are displayed in the combo box with:

HH indicating the hours field,

MM indicating the minutes field, and

SS indicating the seconds field.

Options with AM vs. PM indication are available as well as 24 hour format.

Date Stamp Format

Choose the format of the Date Stamp to be overlaid on the captured image that is provided by the FTP client or HTTP/Web server.

The Date Stamp is generated at the time the image is served to the end user.

The various formats are displayed in the combo box with YY indicating the year field, MM indicating the month, and DD indicating the day.

Caption

Enter a text string to be displayed as a caption on the image provided to users.

The caption is displayed using the current foreground and background colors. The caption font used can be altered from the Choose Font button.

Position

The position option consists of 6 buttons. Click the button corresponding to where in the area of the image you wish the caption to be displayed

Text Color

Choose the color of the text overlaid on the image provided to the user.

The text consists of the Caption/Date Stamp/Time Stamp combined information. A color selection dialog box is provided to define the color.

Background Color

Choose the color to use for the background of the overlaid text on the image provided to the user. The text consists of the Caption/Date Stamp/Time Stamp combined information.

If the transparent option box is checked, the background color selection is not available.

Transparent

This check box indicates that you wish to use a transparent background in the caption of the image.

Transparent mode indicates to write the caption onto the image with no surrounding background box. In non-transparent mode, the caption text is surrounded with a box of the given background color.

Choose Font

The Choose Font button brings up a font selection dialog where a font and size for the caption overlay text can be defined. A 10 or 12 point font is generally a good size for use with NetSnap and images in the 320x240 pixel range.

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If scaled images are provided to users, NetSnap will also scale the font proportionately to fit in the scaled down image.

JPG Factor

The level of JPEG image compression is defined by the JPG factor. Higher values produce less lossy compression at the expense of larger size image files and transfer time. Lower values produce images with lossier compression (possibly more compression artifacts) but at reduced image file size and transfer time. Values in the 70's and 80's are not uncommon. Move the slider left or right to decrease or increase the JPG factor. Also the keyboard arrow keys can be used to step the value in increments of one.

Services (HTTP/FTP) options

On the Services property sheet you can configure the options associated with the Web Server and the FTP client modules of NetSnap:

HTTP:

- Enable HTTP Service
- HTTP Port Number
- Password Protect Server
- User Name
- Password
- Announce to locator service

FTP:

- Enable FTP Service
- Upload History Files
- Server
- User Name
- Password
- Directory
- Filename
- Firewall mode
- Upload every XX seconds

Image History:

- Enable
- Number of Files
- Starting Digits
- Time Between Saves
- Time Units

Enable HTTP Service

Checking the Enable HTTP Service box enables the HTTP web server. This provides a method for other users to access camera images via the World Wide Web using any web browser. The port number the server will use is configured in the HTTP Port Number edit box. (The default value is 80).

HTTP Port Number

The HTTP port number specifies which port number is used to serve the images to the web browser. The standard port number is 80. If you already have another web server on your machine, you need to use a different port number in order to avoid conflicts with the other web server. We suggest you use port numbers, 81, 82, 83, or 84. Note that port number 85 is reserved and should not be used. Other common port numbers used can be 8081, 8082, etc.

If you are not using port 80, then you need to adjust your URL to include the port number, when referring to NetSnap images on your web page, or viewing NetSnap images directly.

The lookup server will forward clients to the correct port number, if you use the lookup server to locate your NetSnap server.

For example:

`mymachine.bigcompany.com:81/netsnap.jpg`

specifies the use of port 81.

Password Protect Server

When this check box is checked, then you will be able to specify a user name and password which must be specified before the client browser will allow the image to be displayed.

Note: The Password protection feature is not available in the eval version of NetSnap.

User name

This edit box allows you to enter the user name which is prompted for when the HTTP server is password protected.

Note: User names and passwords are Case Sensitive.

Password

The password field allows you to specify the password that needs to be entered by the remote user when password protection is enabled on the NetSnap web server.

Note: The user name and password fields are case sensitive and must match exactly.

Announce to Locator service

Checking the **Announce to locator service** box will cause NetSnap transmit the location information necessary for accessing your NetSnap images to the Lookup Server (usually lookup.netsnap.com).

If you have a static IP number (one that does not change every time you connect to the Internet) from your ISP, then you do not need to enable the locator service.

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Enabling the lookup service allows references to your camera images to remain constant even though you may be assigned a different IP address by your ISP every time you dial into the Internet.

The NetSnap Server Info dialog box displays the constant URL that can be used to access your camera images (The unique URL is derived from the ID number assigned to NetSnap during the initial registration procedure).

The lookup server will automatically redirect the reference it receives for your NetSnap server to the current IP number used by your NetSnap server. The announcement happens each time the NetSnap server is started.

When the NetSnap server is stopped, the lookup server will also be informed of the Offline URL you specified. This way an image can be displayed indicating that your camera is off, even without running NetSnap.

Note: If you intend to serve images over an extended period of time, we recommend that you obtain a static IP number from your ISP so that your images will load quickly and do not need to be referred to by the lookup server.

Note: The lookup server may be down on occasions for maintenance, or may not be reachable due to Internet congestion.

Enable FTP service

Checking the Enable FTP Service box enables automatic FTP'ing of image files to the Server defined in the Server edit box.

The User Name and Password entered in the respective edit boxes will be used to log on and upload image files.

The file upload will happen at each of the scheduled connection times and use the filename configured in the Filename box (default **NetSnap.jpg**), or when you click the start the FTP server. The file will be placed in the directory defined in the directory field.

You can also instantly FTP the current image to the server by using the Flash FTP icon on the toolbar.



Note that FTP transfers will also send the image history files if the Upload History Files box is checked.

Server

Specifies the FTP server to which NetSnap shall upload camera images if you enabled the FTP service or when using the FTP Flash feature.

User name

Specify the user name to use when logging on to the FTP server to upload images. Please check with your ISP what your user name is suppose to be.

Note: User names are Case Sensitive.

Password

Specifies the password to use when logging on to your FTP server to upload images from NetSnap.

Consult your ISP for your FTP server password.

Note: Passwords are Case Sensitive

FTP directory

Specifies the directory to switch to before uploading images from NetSnap to your FTP server.

The directory to use depends on how your FTP server is configured. Usually images are kept in a directory reserved for that purpose (such as Images, Gifs, or JPGs).

If no directory is specified, then NetSnap will ignore the directory change request and upload straight into the default directory presented after the FTP logon occurs.

Consult your ISP to determine the directory name to use.

Note: Directory names may be case sensitive on some servers.

FTP Filename

Specifies the filename to use when uploading a camera image to the server.

Note: The filename should end with the .jpg extension as the image uploaded is a Jpeg image.

Firewall mode

Places the FTP service into Firewall mode. This option should be enabled if your system is located behind a fire wall or your ISP does not allow FTP connections to be established from outside your domain.

By placing the FTP service into Firewall mode all FTP connections, including data transfers, are originated from your NetSnap session.

A good indicator that you should enable Firewall mode is if an FTP upload fails, followed by an error message indicating that the PORT command failed.

Upload every xx Seconds

Specifies the interval between FTP uploads while connected.

You may have FTP images uploaded to your web service on a regular interval. The interval specified here, in seconds, determines how often the upload will occur.

A good value is 600 seconds (every 10 minutes). For more frequently updated sites you may wish to specify an interval of 60 seconds, or even less.

The updates will occur only while the NetSnap server is running, either via the scheduler, or via the Start command.

Upload History Files

If this check box is checked then history files will be part of any FTP transfer (either schedule based or Flash FTP).

The history file names are based off the filename defined in the FTP area along with the Number of Files value and the Starting Digits# value from the Image History panel.

The history files will always be of the eight-dot-three (8.3) filename format and end with the .jpg filename extension. A numeric value will be generated starting at the Starting Digits value and continuing for Number of Files digits. Then the sequence will repeat.

Example 1:

Filename: netsnap.jpg
Number of Files: 10

Starting Digits: 0

Netsnap0.jpg
netsnap1.jpg
netsnap2.jpg

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:
netsnap9.jpg
netsnap0.jpg
etc.

(notice that after the 10th file, the history image filename will repeat).

Example 2:

Filename: biglongname.jpg Starting Digits: 84
Number of Files: 11

Biglon84.jpg
biglon85.jpg
:
biglon94.jpg
biglon84.jpg
etc.

Example 3:

Filename: hist.jpg Starting Digits: 9
Number of Files: 2

Hist09.jpg
hist10.jpg
:
hist09.jpg
etc.

Image History Enable

When enabled, the Image History feature will cause to NetSnap to capture an image from the camera on a regular interval (as specified in the Time Between Saves option).

The history images can then be uploaded via FTP if the FTP Upload History Files option is enabled, or accessed from the web through the NetSnap Web server.

To access history files over the web, append a digit to the URL to indicated the history file of interest where the number 0 is always the most recent image history file and larger numbers indicate older image history files. The number supplied via the URL is independent of the data defined in the Number of Files and Starting Digits box. NetSnap will translate to the correct file name each time it is accessed.

Example 1:

```
http://lookup.netsnap.com/7100-0000-000035/0
```

would access the most recent image history file from the given NetSnap server (in this case using a dynamic IP address redirected thru the NetSnap lookup server).

Example 2:

```
http://mymachine.bigcompany.com/3
```

would access the fourth oldest image history file from the **mymachine** computer (in this case with a fixed IP address).

Number of files

Specifies how many history images NetSnap should retain before restarting a new sequence of history images.

Starting Digits

This edit box allows you to specify the first digit in the filename used for uploading history images to your FTP server.

Time between Saves

The time interval between saving of history images. Typical intervals would be 5-30 minutes. Other interval units can be specified in the units control (seconds, minutes, hours, and days).

History time units

Allows you to specify the units used for the Time Between Saves value. Options include seconds, minutes, hours, and days.

Push Stream Options

When users access the NetSnap web server they can request a server push stream of images. This technique allows NetSnap to continue to send updates of images to the user without any web browser requests. (Currently only the Netscape browser supports this technique).

A lead-in and **trailer** image can be part of the push stream. This allows a fixed image to be sent prior to and after the live video is sent. (Not unlike the roaring lion or credits in a movie). These images are normally JPEG files residing on the computer running NetSnap.

On the Push Stream property sheet you can configure:

- Allow Server Push
- Default Delay between Frames
- Minimum Allowed Delay
- Maximum Number of Frames to Show

Lead In Image:

- Enable
- Filename
- File Selection Button
- Display Time

Trailer Image:

- Enable
- Filename
- File Selection Button
- Display Time
- Loop/Display Trailer every Max Frames

Allow Server Push

Enable this check box to allow NetSnap to serve push images when requested. (Push images are accessed using the push option appended to a NetSnap URL). When not checked, a requestor of a push stream will receive a static image.

Note that the other push stream options are disabled if this check box is disabled.

Not all browsers support the push-server feature. Netscape Navigator versions 2 and up support the push-server feature. If NetSnap detects that the browser can not support push-server, then a static image is sent.

You may wish to present your users with an alternative push server technique implemented in the Java-Applet push.class. The included push.htm sample file demonstrates how to use this applet.

Default Delay between Frames

This value (in seconds) defines the time that NetSnap will delay in between successive frames of a push image stream. This value can be overridden by the client/requestor using the delay HTML option as constrained by the Minimum Allowed Delay. Notes that the leadin and trailer images have their own delay time independent of this value.

Minimum Allowed Delay

Specifies the minimum delay between frames when using the Push Stream feature of NetSnap. This allows you to prevent users from requesting a high refresh rate when your bandwidth is limited.

Maximum Number of Frames to Show

This value defines the number of successive image frames to display to a user requesting a push stream. (0 defines no limit i.e. continuous ongoing images). After this number of images is displayed, the push stream ends.

Note that the Loop/Display Trailer every Max Frames check box provides the ability to send a trailer image every maximum frames in an ongoing manner. (The push stream does not stop when using this option).

It is a good idea to limit the maximum number of frames as some Proxy servers will not pass the images through until the image data transmission has completed.

Lead In Image Enable

A lead in image can be provided as the initial image in the push stream display. This function is performed if the **Enable** box is checked.

The image that is provided is defined by the **Filename** edit box. A file can be chosen from a dialog box if desired by clicking the button to the right of the filename edit box .

The leadin image will be displayed for the number of seconds defined in the **# Display Time** edit box. At that point the normal update of NetSnap pushed video images begins.

The leadin image might be an advertisement for a company or a fancy splash screen identifying the source of the video. This image can be created with any paint program. It should be saved in JPEG (.jpg) format, at a resolution of 160 x 120.

Lead In Filename

Specifies the name of the image to be used as a Lead In during push-stream serving.

Lead In Filename button

Brings up a file selection box to pick a Lead In image filename.

Lead In Display Time

Specifies the number of seconds to hold the Lead In image during push stream server operation.

Trailer Image

If the Trailer Image Enable box is checked, a trailer image is provided as the last image in the push stream display. The image that is sent is defined by the Filename edit box. A file can be chosen from a dialog box if desired by clicking the button to the right of the filename edit box.

The trailer image will be displayed for the number of seconds defined in the Display Time edit box. At that point either the push stream ends, or the normal update of NetSnap pushed video images continues if the Loop/Display Trailer every Max Frames box is checked.

The trailer image might be the credits for a particular video source or a reminder on where to purchase a product. This image can be created with any paint program. It should be saved in JPEG (.jpg) format.

Trailer Image Filename

The file name of the image file to be transmitted as a trailing image during push stream serving.

Trailer Image Filename button

Opens a file selection box from which you can select the file of the image to be displayed as a trailing image (at the end) of a push-server sequence.

Loop/Display Trailer

If you click the Loop/Display Trailer check box on the push-server options properties sheet, then NetSnap will insert the trailer image into the push stream every Maximum Number of Frames to Show. After the trailer image is displayed for the specified duration, the push-server stream continues and **does not** stop.

This feature is useful if you wish to display a reminder image to the client on a frequent basis while the client is watching a push stream sequence.

Trailer Image Display Time

Specifies the length of time the trailer image is displayed at the end of a push-stream sequence.

Scheduler Options

The scheduler in NetSnap allows you to specify at which times NetSnap will connect to the Internet and either upload images via FTP or serve to the Web with its HTTP server.

When FTP is enabled, then each time NetSnap connects to the Internet, it will upload FTP images at the specified FTP upload interval .

You can specify the Interval at which NetSnap connects during a specific time period. For example: You could specify that on Weekdays from 7:00am until 5:00pm, NetSnap connects to the Internet every 10 minutes, and stays connected for 2 minutes. If you then set the FTP upload interval to 30 seconds (or something less than about 1 minute), NetSnap will upload an FTP image each time it connects.

A Web based schedule would be more like this example:

Connect on Weekdays between 7:00am and 5:00pm, at an Interval of 60 minutes, then stay connected for 60 minutes. This will cause NetSnap to redial every 60 minutes, to reestablish the dial-up connection.

If you wish to serve to the WWW be sure to enable the HTTP service on the Services Options sheet.

On the Schedule property sheet you can configure:

Manual Connect	
Add	(add a new schedule event)
Remove	(remove an existing schedule event)
Edit	(edit an existing schedule event)

Manual/Automatic Connection

Checking the manual connect box stops any scheduled connections to the Internet. If the manual connect box is not checked, NetSnap will connect to the Internet at defined schedules.

The connection may be a dial-up or permanent connection as defined on the Connections Option sheet.

Schedule list

The schedule list on the Schedule Options sheet lists the currently scheduled events.

For each scheduled event, displayed are the start and end times for the event, the interval at which the event is to occur during the start and end time period, the duration of each event, and the days of the weeks for which the event should take place.

Active days are indicated by an UPPER case day of week letter, inactive days by a lower case letter. For example:

SMtwfS

indicates that the schedule event occurs on Mondays and Saturdays.

Add Schedule event

When you click the Add button on the Schedule Options sheet you will be prompted with a dialog to describe a new schedule event.

Remove Schedule Entry

When you click on the Remove button on the Schedule Property sheet, the currently selected entry from the schedule list will be removed.

The remove button is only enabled if you have selected an entry in the list.

Edit Schedule Entry

When you click the edit button on the Schedule properties sheet you will be prompted with an edit dialog box in which you can edit the various options for the event current selected in the schedule list.

The Edit button is only enabled if you have selected an event in the schedule list.

Schedule Entry Editor

The schedule entry editor is a dialog box which allows you to edit the day of the week, the start time, the end time, the connection frequency, and the connection duration for scheduled connection events to the Internet.

- Weeday
- Start time
- End Time
- Connect Interval
- Connect duration

Schedule Entry weekday

Check the day(s) on which the connection event is to occur.

Start at

An edit box on the schedule entry editor which allows you to specify the starting time at which the connect event is to occur.

You may specify the starting time in 12 hour (am/pm) format or in 24 hour format.

Example:

12:15pm
17:00

End at

An edit box on the schedule entry editor which allows you to specify the ending time at which the connect event terminated.

You may specify the end time in 12 hour (am/pm) format or in 24 hour format.

Example:

12:15pm
17:00

Connect interval

This edit box on the schedule entry editor dialog allows you to specify the connect interval or frequency. You specify, in minutes, how often NetSnap will connect to the Internet during the Start and End time interval specified for the connection event.

Typical values would be to Connect every 30 or 60 minutes.

Connect duration

This edit box on the schedule entry editor dialog allows you to specify the connect duration each time a connection is established during the Start and End time period specified for the schedule entry.

Typical durations are 35 or 65 minutes for Web served images or 1 to 2 minutes for FTP only uploaded images.

NetSnap Menu Commands

The following are the main menu items available on the NetSnap menu bar:

- Server
- View
- Options
- Help

Server menu commands

The Server menu offers the following commands:

Start Server	Start the camera server.
Stop Server	Stop the camera server.
FTP upload	Flash FTP upload.
Exit	Exits NetSnap.

Start (Server menu)

This command starts the camera server. Depending on the Scheduler configuration, the server will either start the scheduler, or immediately connect to the Internet.

Stop (Server menu)

This command stops the camera server. If you have selected scheduler operations, the scheduler is stopped, then any services such as HTTP or FTP are stopped. You must stop the camera server with this command before exiting NetSnap.

FTP Upload (Server menu)

The FTP upload command will initiate a Flash FTP session. This causes NetSnap to immediately connect to the Internet (if not already connected), upload the current image from the camera, upload any history images (if Image history is enabled), and disconnect from the Internet (if not already connected).

Exit command (Server menu)

Use this command to end your NetSnap session. You can also use the Close command on the application Control menu. The option to leave NetSnap running as a windows service is available by choosing the **Yes** option from the exit message box.

If the default **No** selection is chosen, NetSnap will exit if the server is shutdown.

You must stop the server before exiting.

To stop the server use the STOP command (Server, Stop) or the toolbar button:



The **Cancel** option is also available to return back to *NetSnap*.

View menu commands

The View menu offers the following commands:

Toolbar	Shows or hides the toolbar.
Status Bar	Shows or hides the status bar.
Resize	Resizes the application window to fit the current camera video output.

Toolbar command (View menu)

Use this command to display and hide the Toolbar, which includes buttons for some of the most common commands in NetSnap, such as File Open. A check mark appears next to the menu item when the Toolbar is displayed.

See Toolbar for help on using the toolbar.

Status Bar command (View menu)

Use this command to display or hide the Status Bar, which describes the action to be executed by the selected menu item or depressed toolbar button, the keyboard latch state, and server statistics.

A check mark appears next to the menu item when the Status Bar is displayed.

See Status Bar for help on using the status bar.

Resize command (View menu)

The Resize command causes the main NetSnap window to resize itself around the image preview area.

You may have changed the size of the NetSnap window to increase the size of the Server activity monitor list box, issuing this command quickly resizes NetSnap to normal size.

Options menu commands

The Options menu offers the following commands:

Camera	Displays the camera adjustment dialog box. This dialog box provides adjustments for your particular camera/video capture device.
Image Quality	Displays the camera image size adjustment box. This dialog box provides image size adjustments for your particular camera/video capture device.
Server	Displays the server configuration dialog box. (Options for HTTP/FTP servers, schedules, and connections).

Camera (Options menu)

The camera command from the options menu brings the camera configuration dialog for your particular camera.

Consult the documentation for your camera on how to use that dialog.

Typically this command allows you to set camera features such as Brightness, Hue, and other options.

Image quality (Options menu)

This command brings up the Image Size and Quality configuration dialog for your particular camera driver. Consult the documentation for your camera on how to configure these settings.

Typical options include the Image size, Special Effects, color select, and Sharpness.

The best image quality can be obtained by selecting 24 bit images (also indicated by settings such as "Million Colors").

For image size we suggest you use a size of 320 by 240 pixel and then use the scale option on your web pages to scale the image to a size you requires. This will yield a nice preview area and relatively small file sizes.

Suggested Settings Summary:

Color: 8 bits (256 colors), 16 bits (thousands of colors) or 24 bits (millions of colors). Some cameras also allow different compression modes, chose 24 bit RGB, or 16 bit RGB or 16 bit RGB.

Size: 320 x 240 pixels

Note: On cameras using the parallel port as an interface, selecting 24 bit images can impose a large overhead on the processor, especially if the image area is not well lit. You may wish to select an 8 bit image (256 colors) or 16 bit image (thousands of colors) to speed up performance.

For best quality with minimum impact on system performance we suggest a capture board based camera.

Server command (Options menu)

The Server command from the Options menu brings up the NetSnap configuration property sheets. Here you can configure the various options for your particular preferences and environment. Consult the chapter titled "Configuring Netsnap" for more information on the various options.

Help menu commands

The Help menu offers the following commands, which provide you assistance with this application:

Help Topics	Offers you an index to topics on which you can get help.
Registration Wizard	Allows you to register NetSnap with the registration server.
Setup Wizard	Runs the NetSnap Setup Wizard.
Goto Website	Visits the NetSnap website using your default web browser. You should be connected to the Internet before using this command.
NetSnap Server Info	Displays the your NetSnap ID number and the URLs you can use to view the images from the camera.
About	Displays the version number of this application.

Registration Wizard (Help menu)

The Registration wizard allows you to register and to update registration information for your copy of NetSnap. Use this command whenever you purchase additional streams, or upgrade your eval version to a full version.

The Registration wizard will prompt you for user registration information, contact the registration server, and obtain the latest settings for your ID number of NetSnap.

Setup Wizard (Help menu)

Use this command to proceed to the Setup Wizard. This menu based procedure will prompt you through the steps necessary to configure and use NetSnap. The following steps are performed:

- Entering license number
- Entering User Registration information
- Configuring the NetSnap options

Go to Website (Help menu)

This command will launch your default web browser and open the NetSnap product support page. Here you can find out about new versions, patches, and general support topics.

NetSnap Server Info (Help menu)

Brings up a dialog box which displays the following items:

- NetSnap ID:** The NetSnap ID number allocated to your copy of NetSnap. This ID number is what identifies your particular copy of NetSnap. The ID also serves as a basis for the URL used to access images from NetSnap if you wish to use the lookup referral service.
- Lookup based URL:** The URL used to display the camera image from your browser or on your web page, if you are using the lookup referral service.
- IP based URL:** The URL used to display the camera image from your browser or on your web page, if you have a fixed IP number.

Note: The IP number is only valid if you are on a permanent LAN connection, or you are using a fixed IP number on your dial up account.

We strongly recommend you obtain a fixed IP number from your ISP if you wish to serve images on a constant basis.

About command (Help menu)

Use this command to display the copyright notice and version number of your copy of NetSnap.

Near the bottom of the About box you will see the URL to reference your copy of NetSnap on the web when used with the locator service.

User Registration Dialog

The User Registration Dialog is a form which prompts you to enter your personal registration information. The User Registration Dialog is presented as one of the pages in the Registration Wizard.

By keeping your registration information up to date, you will benefit from timely notification of upgrades and bulletins on NetSnap.

Run the Registration Wizard any time you wish to update your contact information, or when you are upgrading your copy of NetSnap from an evaluation to a full version, or after you purchase additional streams.

The Registration Wizard will contact the registration server to update your information and obtain new settings.

Toolbar

The toolbar is displayed across the top of the NetSnap application window, below the menu bar. The toolbar provides quick mouse access to the most common commands used by NetSnap,

To hide or display the Toolbar, choose Toolbar from the View menu (ALT, V, T).

NetSnap Menu Commands

Click To



Start the camera server.



Stop the camera server



Resize application window to fit
camera preview display area



Upload (via FTP) current image to
FTP server.



Display Info Dialog for URL
information

Status Bar

The status bar is displayed at the bottom of the NetSnap window. To display or hide the status bar, use the Status Bar command in the View menu.

The left area of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. This area similarly shows messages that describe the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of the toolbar button command you wish not to execute the command, then release the mouse button while the pointer is off the toolbar button.

The right areas of the status bar indicate which of the following keys are latched down:

Indicator	Description
Served	The number of images sent since NetSnap started.
Streams	The number of active and total streams.
CAP	The Caps Lock key is latched down.
NUM	The Num Lock key is latched down.
SCRL	The Scroll Lock key is latched down.

Note: This command is unavailable if you maximize the window.



Open help topic list

Glossary

Browser

In the context of the Internet browser, or web browser, refers to a software application which allows web pages on the Internet to be viewed.

Popular browsers include: Netscape Navigate and Microsoft Internet Explorer.

In the case of NetSnap, your computer running NetSnap turns into a Server while connected to the Internet so that it can transmit (or serve) images to other computers.

Dial-Up Networking

Dial-Up Networking is a feature of Windows which allows network connections (including connections to the Internet) to be established over a dial-up connection through a modem.

FTP

File Transfer Protocol. The protocol (or language) used to transfer files over the Internet.

HTML

Hyper Text Markup Language - the language used to build web pages.

Web pages are built from text and special sequences of text called tags to indicate items such as text attributes (bold, italic, etc.), or graphic images and links.

HTTP

Hyper Text Transfer Protocol, the protocol (or language) used to send Web page information over the Internet.

ISP

Internet Service Provider, the provider through which you gain access to the Internet.

Server

A computer which transmits information, such as web pages and files, over a network is usually referred to as a server.

URL

URL is an acronym for Universal Resource Locator and is the technical term used for the address of a specific web page, image on the web, or other resource that can be found on the Internet.

A typical URL pointing to an image may look like this:

`http://www.bigcompany.com/picture.gif`

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Technical Support

For technical questions about NetSnap, please check our support web site at <http://www.netsnap.com> or send E-mail to support@netsnap.com.

In all E-mail correspondence, be sure to include your NetSnap ID number.

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