



Official Webmaster

directNIC Staff
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1 Introduction

Thanks for Choosing directNIC

directNIC has enjoyed great success in providing user-friendly solutions to webmasters, businesses, and casual web hobbyists all over the globe. The feedback and experience that those customers continue to provide us makes it possible for us to keep refining and growing a product that puts domain name registration and management in the user's control.

Thanks to this success, our feature set has grown far beyond Linguatron, domain resale, and free hosting. Because of this, we are extending a series of directNIC Free Guides to the public, so that new users can learn how to bring our powerful services into their projects.

About this Document

This document is intended to help directNIC users quickly familiarize themselves with our services, with a focus on the tasks involved in choosing, purchasing, hosting, and creating a web site in conjunction with our services. It is not a guide on administering a web server or other server software, graphic or visual design, HTML authoring, or other specifics that are also related to the general title "webmaster." There will be directNIC Free Guides on some of those topics in the future, but this particular guide is limited in its scope to the tasks involved in using directNIC services.

Audience

The intended audience for this document includes any directNIC customer, or any person evaluating the wide range of service offerings available for becoming a website owner and maintainer. However, it is free to the public and limited only by ownership and copyright restrictions, which are detailed below.

Terminology

Throughout this document, we will make use of a number of terms, which may be foreign to people new to the Internet or the business of registering and making use of an Internet domain name. We will try to be as clear as possible and explain unique industry words. If that's not enough, any terms you are unclear about can be looked up on the Internet, using free services at websites such as <http://www.dictionary.com> and <http://www.computeruser.com/resources/dictionary/>, which host online, searchable dictionaries.

2 Webmastering 101

Today, directNIC's feature set includes several tools that help webmasters tailor their domains to suit a variety of needs. Of course, we also maintain Linguatron, a powerful domain name search engine. Below, we discuss some details about these services. Keep them in mind as you read the rest of this guide. Doing so will help you flesh out your plan to build a website with directNIC.

Domain Registration and Linguatron

directNIC's registration and search utility work together to help you find the best domain name for your new business or website. The search utility Linguatron boasts powerful language-based word mutation capabilities. Our registration process, which is completely web-based (no email forms to return, and no need to wait on hold!) puts you in charge of your purchases and eliminates wait time when buying domains.

Linguatron works in two ways. It has a bank of categories, based on topic or idea, which, when followed via hyperlink, lead the user to subcategorized words that relate to that topic. By surfing through this thesaurus-like structure, you can pinpoint popular terms and buzzwords, find alternatives that people might search for when looking for a site like yours, and thereby maximize the significance of your site in your target industry.

The other mode of use for Linguatron is a simple keyword search, which returns popular categories and word synonyms for your consideration.

Once you've chosen a word or words you want to base your domain name off of, Linguatron goes a step further by suggesting a huge list of possible domain names, using popular catch-terms, all mutated from the word you selected. You can follow these links directly to a shopping cart and then keep looking.

Our registration process is totally painless. After signing up for a free account, you can use Linguatron to find domains or enter specific domain names you want to purchase, add them to a shopping cart, and check out when you're ready. You can choose to store your credit card information for quick use later, or keep it hidden so that only our internal billing systems can see it.

Free Hosting Options

Once a domain is registered and appears in the Domain Manager in your account, you can do whatever you want with it. The most inexpensive options are, of course, the free ones. We offer free website hosting to all our customers, for all their domains, with no activation charge.

A free hosted domain is served from our fast Tigershark web servers. There are restrictions on the use of our free hosting service, which are detailed in a section below. Setting up any of our hosting plans is a mere matter of a few clicks.

Bannerless Hosting

Similar to our free hosting service, this service provides you with a place to put your website without having to shop around for a third-party provider. At US\$15 per year (or 2Gb of transfer, whichever comes first), you get a site with fewer restrictions and no banner ads, as well as the ability to manage your site fully using our Domain Manager.

Premium Hosting

Based on the plan you select, Premium Hosting gives you up to 6000MB of Disk space and 1000GB of transfer per month for 1, 3, or 12 month periods.

It also includes:

1. POP3 Email Accounts
2. Email Forwarding rules
3. Mailing Lists
4. MySQL databases
5. Email Auto-Responders
6. Email Anti-Spam and Anti-Virus
7. PHP (with GD lib and most standard PHP modules)
8. Perl CGI

directDNS

This is a great service for businesses and hobbyists who want to host their site on their own, but don't want to administer a DNS server themselves. At US\$5 per year, you can't go wrong.

3 Getting Started

In this short chapter, we'll cover the prerequisites for getting started as a directNIC webmaster.

What You'll Need

All you need to get started is a domain name from \$15 per year with directNIC.com. That's right! Thanks to the fierce competition that arose after domain name sales were deregulated, domain name prices have dropped drastically. While many companies offering low prices on domain names do so at the expense of customer service or user control, our fully automated, web-based system allows us to focus on service and innovation, while still profiting from such a low price.

Site Design Concept

You should have some idea of what kind of website you want to run. While this is a very broad category of decision-making, the two most important aspects of your site to decide upon early on are the site's primary topic (such as a particular line of products, or a certain industry or hobby) and the type of information or services within that topic that you plan to provide on your website (such as news, free downloads, reference material or photos).

Of course, you can continue from here with very little planning, and you won't have to answer any questions about these decisions before purchasing or using your domain. However, doing so will definitely help you make the right choices before you buy.

Reference Material

In order to go even further into planning your website's details, you might consider picking up reference material from your local bookstore or library. There are books that cover not only the topics your website will focus on, but also books that provide tutorials and reference information on the different technologies inherent in building a website. More information on this can be found below, in the section "Becoming an Expert."

Hardware & Software

With the popular proliferation of personal computing products, it may be pointless to point out that purchasing, producing, and publishing an Internet point of presence is practically impossible without first purchasing a personal computer.

In addition, you will need some way of accessing the Internet via that computer. Your local phone book probably has a section for Internet providers. Those companies will help you choose and set up a connection for your home, at prices ranging from \$10 or less per month and up for basic 56K modem access, to \$40-\$70 for high speed access in most cities in the United States. Local prices and availability will depend on the maturity of the communication networks put in place by the phone, Internet, and cable companies in your area.

Finally, you will need some software. At the minimum, you will need a web browser and an FTP program. Several alternatives exist for each of these needs, and chances are, one of each of these came pre-installed with your computer. You might also want a web editor program, which will allow you to build your website in an environment similar to the layout tools common in most word processors.

4 Registration

In the process of getting a website up and running, the first necessary step is to purchase the registration for the domain name(s) you want. directNIC can fulfill this need, providing a low price (US\$15 per domain, per year) which includes not only the registration, but also the opportunity to use our powerful Domain Manager and other configuration tools for your domain.

4.1 Signing Up with directNIC

Signing up with directNIC is fast and easy. Go to <http://www.directnic.com> and click the tab labelled "Sign-up" at the top. Fill out the form (providing, at the minimum, complete information for all the required fields). Be sure to use an email address that you have access to, so that you can retrieve your activation code. Once that's been emailed to you, enter the activation code into the form that appeared after you signed up. Then, log in using your username and password (which you selected when filling out the sign-up form). The whole process takes about 10 minutes.

4.2 Searching with Linguatron

As mentioned above, there are two ways to search for the perfect domain name with Linguatron. In this section, we cover them both in more detail.

Text Search

directNIC offers three different types of text search when looking for a domain name. They are the WHOIS lookup, the basic domain search, and the advanced Linguatron search.

The WHOIS lookup gives information about a domain that has already been registered. WHOIS is useful for contacting the current registrant of a domain, verifying that a newly purchased domain has propagated to the Internet's domain system, and learning other details about an existing domain name.

Basic domain searches are just that: you enter a domain name, and our system determines whether that domain is available for registration. It also suggests alternatives based on what you've entered (such as listing the .net, .com, and .org variants of what you've entered, and more).

The Linguatron search uses your word as a launching point in generating a list of words, phrases, and mutated domain names that are similar to what you entered. For instance, searching for "watermelon" shows that watermelon.com, watermelon.org, and watermelon.net are all taken; however, it suggests more than a dozen unique second-level domains, using the names of plants genetically related to watermelons and other watermelon-based nicknames. Below that, pages upon pages of search suggestions are listed using phrases related to watermelons; such as "watermelon-seed.com" and "the-enormous-watermelon.com." Lastly,

below that, there is another huge list of domain names using the word "watermelon" in conjunction with common buzz-prefixes. Examples of this are "1-800-watermelon.com" or "watermelonsuperstore.com."

Spending a little time in Linguatron can be extremely valuable, because it helps you explore the vast linguistic possibilities behind your domain idea. It's like having your own marketing think-tank with a built-in thesaurus and dictionary.

Topic Navigation

The other way to use Linguatron is great for when you're having trouble locking down the right word for your domain. After click on the Search tab, click a category in the "Domain Directory." There are plenty of categories to choose from, spanning topics such as "Communication," "Feelings and Emotion," or "Food." Each of these is fully subcategorized, and can assist in pinpointing a word or phrase that summarizes the image you want for your new website.

Using this tool eventually leads you to results similar to those achieved by performing a text-entry advanced search (detailed above).

4.3 Your Shopping Cart

When you are logged into directNIC with your username and password, your entire session at the website is encrypted using SSL (a standard Internet technology for protecting the transfer of data between your computer and the web). As you find the domain names you want, you can add them to your Shopping Cart by clicking where instructed.

Your Shopping Cart is stored on your computer, not ours. This is done using another standard web technology, called "cookies." In order to purchase domains with directNIC, you will need to allow these cookies to be placed on your computer. Cookies are small bits of text data (usually just one line long) that your computer provides to our web site; this is how a website such as directNIC can remember information you've provided from page view to page view.

Once you're ready, you can click the link, labeled "Click here to check out." This will lead you to forms, where you provide your billing information and complete the purchase. Be sure to read everything very carefully. It's important to understand that all domain name sales are final; typographical errors, failure to read and understand our terms of service, and other mistakes are not reversible. After providing all your information you will see a summary page, which explains the purchase you are about to make; review this and click "Purchase Domains" when you're sure it's all right.

When you make a purchase or choose to remove domains from your cart, the domains are emptied out of the cookie on your computer, which holds your shopping cart.

4.4 Purchasing a Domain Name

This section contains helpful advice you should keep in mind when buying domain names, especially for business use.

Avoiding Common Problems

Through careful analysis of our customer support trouble ticket history, we have determined that the most common mistakes made while purchasing domains are:

Typographical errors - the user types too fast and enters a misspelled version of the domain they wanted. The error isn't caught until after the purchase is made. Unfortunately, domain names can't be "corrected" later, nor can they be refunded or exchanged for the right one.

Wrong registration period - the user forgot to select the number of years they wanted to register the domain for, resulting in a registration for either more or fewer years than they had planned to purchase. The default registration period with directNIC is 2 years; this can be changed to 1-5 years. This cannot be changed after the registration has been processed, however. You will be notified when your domain is nearing expiration, and at that time you can renew the domain for 1-5 years.

Some Legal Advice

Our in-house legal counsel constantly monitors the changing landscape of Internet law, to help us resolve disputes, answer inquiries by our customers, and ensure that directNIC always operates within the legal restrictions of ICANN and other ruling bodies. Thanks to this, we are able to provide a few notes regarding common Internet practices of questionable legality.

Cybersquatting

Cybersquatting is a term that typically refers to the registration of domain names that either incorporate the exact name or identity of an existing organization or incorporate a variation, but similar name relating to the identity of the entity that holds a protected mark. Cybersquatters purchase and hold these domains in anticipation that the company who owns the intellectual property rights to the name(s) will contact them to purchase the domain(s) at a price far in excess of what was actually paid to register the domain.

4.5 Transfers

By now, readers who have already registered their domains with another registrar are probably wishing they'd shopped around, and purchased them using directNIC's easy service. No problem! Domain names can be transferred from other registrars to directNIC with the same ease as if you had registered them with us to begin with.

How Transfers Work

Although our web-based interface hides it pretty well, the fact is that, behind the scenes, domain name transferral is a somewhat complex process. Because of this, sometimes there is confusion about what aspects of the transfer process we can control.

In brief, here's how it works:

1. A customer purchases a transfer request; this means that the user is purchasing an attempt at transferring the domain. The transfer fee is the same as the regular domain registration fee. Successful transfers result in a domain registration period of 1 year in addition to the time remaining on the original registration.
2. A transfer authorization email is sent to the administrative contact in charge of the current registration. It contains instructions on confirming the transfer request. Please note that for .EU domains, the confirmation email is sent to the registrant contact instead of the administrative contact.
3. Depending on the policies of the company currently holding the registration, other steps may be required, including additional confirmation steps, adherences to service contracts, or other legal requirements. In most cases, however, another email will give simple instructions on confirming the domain transfer via an email reply or website form.
4. The current registrar informs directNIC that the transfer has been either approved, rejected, or has not been responded to within a certain time limit. If the transfer was confirmed, it is moved from the old registrar to the user's Domain Manager in directNIC.

How to Ensure a Successful Transfer

Here are some steps you can take to help ensure that your transfer is successful.

1. Make sure that the contact information, especially the email address, used in the current registration is correct and current.
2. Be sure to watch your email over the next 3-10 days for information about your transfer. Read and follow any instructions carefully and quickly.
3. Begin the transfer process at least 14 days before the current registration is set to expire.

4.6 Hosting Options

Once your domain is registered, it's time to consider your options for hosting it. Web hosting is a service that provides you with an account on an Internet web server. Using that account, you can upload the files that make up your web site, and they will be immediately viewable from your web address.

directNIC offers web hosting services. As your registrar, we do not require you to use our hosting services; you are free to host your site with any company. Below, we will explain both directNIC's hosting options, as well as how to use the Domain Manager to enable you to use other hosting services and options.

4.6.1 Free Hosting with directNIC

This is our original hosting service. Besides standard hosting, you can set up virtual hosts, which allow you to create separate websites for the same domain by prepending something other than www at the beginning. (For instance, you could create kids.yourdomain.com, help.yourdomain.com, etc., each with separate email addresses.)

Pros and Cons

Pros

Well, it's FREE! With this service, you get an FTP account on one of our web servers, where you can upload your site files. The activation process is very simple, because it's all handled via the Domain Manager. Simply activate directNIC Free Hosting in your Domain Manager for any domain you want.

Cons

The drawbacks of directNIC's free hosting services are mandatory banner ads and limits on the types and sizes of files you can host. The web server, Tigershark, inserts banners into your HTML code, advertising the services of directNIC or our advertising clients. It also automatically deletes files larger than 200K on a regular basis, as well as files that are not HTML (Hypertext Markup Language), SWF (Macromedia's Shockwave Flash), JPG/JPEG/JPE (image format), GIF (Compuserve's Graphic Interchange Format), PDF (Adobe's Portable Document Format), JS (JavaScript), or TXT (plain old text). Finally, files hosted on directNIC free servers cannot be referenced from other web servers (using IMG or LINK tags, for instance). These policies allow our servers to operate efficiently enough to provide free hosting.

Service Details

For more detailed information than what is provided here, see our terms of service agreement (http://www.directnic.com/legal/free_hosting.php), which provides full details.

Simply put, directNIC free hosting provides an Internet presence for websites for personal or business use. These websites may use standard web technologies as discussed above for any legal purpose unless otherwise disallowed by our terms of service agreement. The service is free, but there is no warrantee against downtime or loss of data.

How to Activate Free Hosting

The following procedure works for any domain that is registered through us. Note that activating free hosting will cancel a prior purchase of Paid DNS Hosting or Bannerless Hosting, and restoring either of those services will require that it be purchased again at the regular service price.

1. Log into directNIC's "My Account" section using your username and password.
2. Enter the Domain Manager by clicking on the appropriate tab at the top.
3. Locate the domain you want to work with, in the list of domains that appears. If you have enough domains, your list may be broken up into smaller lists; follow the instructions on the screen to navigate through your registered domains until you find the one you want. You can also type the domain name into a search box.
4. On each page in the Domain Manger is a legend, describing the icons used to denote various features accessible from here. One of them is a link to the Hosting Options for each domain (as of version 2.0 of directNIC, that icon is a tiny white house in a blue circle). Click on that icon on the same line as your domain name.
5. If you click the icon and get a message telling you that hosting is not available because your domain does not have the proper nameservers, you can change nameservers by clicking the icon for changing nameservers (a white computer in a blue circle) and choose to reset these to directNIC defaults. Then, return here and click the icon for hosting information.
6. The current hosting plan (if any) will be shown. For options on changing this, click "Change Hosting Type."
7. From the list of hosting options, choose "Free web site" by clicking the radio button next to it. Then, click the button at the bottom, labeled "Change Hosting Type."

If you had to change nameserver options in order to access the hosting information, it will take between 48-72 hours before that change will take effect. Otherwise, it will be virtually immediate.

4.6.2 Bannerless Hosting with directNIC

Similar to our free hosting, this low-priced service (US\$15 per year or 2Gb of data served, whichever comes first) removes several restrictions, including the mandatory banners.

Pros and Cons

Pros

For the low price of US\$15, you get a lot! Shop around for web hosting services and you'll find this competes well against prices for similar services. The 1 year/ 2Gb limit is very generous; 2Gb is a huge amount of data. It's highly doubtful that any but the most successful websites will exceed this in a year. In addition, the file size limit is raised considerably; 5Mb is the largest that any single file can have on this service. The file type limit is completely removed in this service, but server-side extensions and programs (such as CGI, Perl, PHP, FrontPage Extensions, and ASP) won't function.

Cons

As mentioned, there is no support for server-side executable web programs; only basic web sites and other downloadable files. The 5Mb file size limit is generous, but doesn't provide for large downloads, such as applications, or large audio/video files.

Service Details

With the exception of the file size limit, file type limit, file hotlinking, and mandatory banner, the service details are exactly the same as those for Free Hosting, and the same terms of service agreement (http://www.directnic.com/legal/free_hosting.php) applies.

How to Activate Bannerless Hosting

1. Login to directNIC's "My Account" section using your username and password.
2. Enter the Domain Manager by clicking on the appropriate tab at the top.
3. Locate the domain you want to work with, in the list of domains that appears. If you have enough domains, your list may be broken up into smaller lists; follow the instructions on the screen to navigate through your registered domains until you find the one you want. You can also type the domain name into a search box.
4. On each page in the Domain Manager is a legend, describing the icons used to denote various features accessible from here. One of them is a link to the Hosting Options for each domain (as of version 2.0 of directNIC, that icon is a tiny white house in a blue circle). Click on that icon on the same line as your domain name.
5. If you click the icon and get a message telling you that hosting is not available because your domain does not have the proper nameservers, you can change nameservers by clicking the icon for changing DNSs (currently a white computer in a blue circle) and choose to reset these to directNIC defaults. Then, return here and click the icon for hosting information.
6. The current hosting plan (if any) will be shown. For options on changing this, click "Change Hosting Type."
7. From the list of hosting options, choose "Banner Free Hosting" by clicking the radio button next to it. Then, click the button at the bottom labeled "Change Hosting Type."
8. Read the instructions carefully, and fill in the appropriate billing information. Then, click "Purchase."

4.6.3 Premium Hosting

Based on the plan you select, Premium Hosting gives you up to 6000MB of Disk space and 1000GB of transfer per month for 1, 3, or 12 month periods.

Pros and Cons

Pros

For the low monthly fee from \$3.95, you get tons of advanced features such as MySQL databases, email anti-spam and anti-virus, Perl CGI, PHP with GD lib and most standard PHP modules, web-based file editor, and Webalizer traffic analysis. You also have pop3 email accounts, webmail, email forwarding, mail list, email auto-responder.

Cons

With so many advanced features available, you would need quite some time learning how to use all of them!

Service Details

Bronze Plan:

1. Monthly fee: US\$3.95
2. Disk Space: 800 MB
3. Monthly Data Transfer: 100 GB
4. POP3 Email Accounts: 40
5. Mailing Lists: 100
6. MySQL Databases: 10

Gold Plan:

1. Monthly fee: US\$8.95
2. Disk Space: 2000 MB
3. Monthly Data Transfer: 400 GB
4. POP3 Email Accounts: 100
5. Mailing Lists: 200
6. MySQL Databases: 30

Platinum Plan:

1. Monthly fee: US\$15.95
2. Disk Space: 6000 MB
3. Monthly Data Transfer: 1000 GB
4. POP3 Email Accounts: 250
5. Mailing Lists: 300
6. MySQL Databases: 75

4.6.4 directDNS with directNIC

DNS, or Domain Name System, is the name for an automatic exchange of information between computers on the Internet. DNS translates human-readable addresses (such as www.directnic.com) into a numeric, machine-language IP address (such as 12.47.200.197). Until recently, directNIC did not offer the ability to control a domain's DNS records; they were either hosted with directNIC, using pre-set DNS records, or the DNS and website were hosted elsewhere (see "Using Other Hosting Providers," below).

Now, however, users have the option to pay US\$5 (per domain, per year) for the ability to manage their own DNS with directNIC. This means that, while hosting your website at another company or at your own location, you still have full control over the addresses used for your mailserver and any web or other sites on your domain.

Pros and Cons

Pros

US\$5!!! Many companies charge this much just to make a single change to a paid DNS record, with yearly service usually starting at \$15 and up. By managing your own DNS, you can do virtually anything you want with your domain. This is a dream come true for webmasters who run their own servers at their location.

Cons

Cons? What cons? US\$5 for full control of your domain's DNS doesn't leave much room for a downside.

Service Details

There are no specific service details regarding directDNS; however, it is covered by our general terms of service agreement (<http://www.directnic.com/legal/policy.php>).

How to Activate directDNS

1. Login to directNIC's "My Account" section using your username and password.
2. Enter the Domain Manager by clicking on the appropriate tab at the top.
3. Locate the domain you want to work with, in the list of domains that appears. If you have enough domains, your list may be broken up into smaller lists; follow the instructions on the screen to navigate through your registered domains until you find the one you want. You can also type the domain name into a search box.
4. On each page in the Domain Manger is a legend, describing the icons used to denote various features accessible from here. One of them is a link to the Hosting Options for each domain (as of version 2.0 of directNIC, that icon is a tiny white house in a blue circle). Click on that icon on the same line as your domain name.
5. If you click the icon and get a message telling you that hosting is not available because your domain does not have the proper nameservers, you can change nameservers by clicking the icon for changing DNSs (currently a white computer in a blue circle) and choose to reset these to directNIC defaults. Then, return here and click the icon for hosting information.
6. The current hosting plan (if any) will be shown. For options on changing this, click "Change Hosting Type."
7. From the list of hosting options, choose "directDNS" by clicking the radio button next to it. Then, click the button at the bottom labeled "Change Hosting Type."
8. Fill in the appropriate billing and host information using the forms provided.
9. DNS changes take 48-72 hours to propagate throughout the Internet.

4.6.5 Using Other Hosting Providers

For various reasons, you might opt to purchase service from another company to get full-featured web hosting without restrictions.

Pros and Cons

Pros

This gives you full consumer prerogative over what options, geographic location, bandwidth restrictions and other service details you want to pay for. A full service web host often allows at least some guarantees about backups, as well as access to CGI or another executable web method, meaning your sites could be interactive, processing forms or allowing total e-commerce. For an additional fee, many providers will also give you a UNIX login to your server or a database account.

Cons

The only direct disadvantages involved in choosing a third-party web hosting provider are the cost, and the possibility of getting less control over your domain's hosting options than you might get at directNIC. Using two or more companies for operating your web site also increases the chances of website downtime, since, if either directNIC or your hosting provider experiences an outage, the site will probably be unreachable.

How to Use Another Hosting Provider

1. First, shop around. Consider what features you currently need for your website, and compare the prices of companies that provide these services and options. Also, find out where the website would be located geographically, what kind of connection the provider has to the Internet, and what company (or companies) provides their connection. Be aware that companies with multiple Internet providers will often be more reliable.
2. Subscribe for service with that company. Some hosting companies also resell domain names; be sure that you don't accidentally purchase a new domain in the process of trying to host the one you already have!
3. Record the information provided by that hosting company, particularly your username, password, and DNS addresses. Don't lose them!
4. Login to directNIC's "My Account" section using your username and password. (The procedure from here differs from the ones in other sections, so read on.)
5. Enter the Domain Manager by clicking on the appropriate tab at the top.
6. Locate the domain you want to work with, in the list of domains that appears. If you have enough domains, your list may be broken up into smaller lists; follow the instructions on the screen to navigate through your registered domains until you find the one you want. You can also type the domain name into a search box.
7. Click the icon for changing DNSs (currently a white computer in a blue circle) and change them to the DNS addresses provided by your web host.

8. DNS changes take approximately 48-72 hours to propagate throughout the Internet's DNS network.

4.6.6 Self-Hosting

Thanks to the availability of free and low-cost server software, private individuals, as well as businesses, can host their own servers from any Internet-connected computer with a constant connection and a static IP address. (A static IP is an Internet address that never changes, which is sometimes an optional service when you purchase high-speed, "always-on" Internet service. Contact your Internet access provider for details.)

You have the option of running your own DNS server (not a task to be taken lightly!) or using our directDNS service. However, installing and administering your own Internet servers is far beyond the scope of this document. The software provider and your local bookstore should both have reference material to help with that.

5 Designing Your Website

Building a website is a lot like playing with a Rubik's Cube puzzle in two ways; it takes minutes to learn but a lifetime to master, and, no matter how much you work at it, it's never quite done. This section points you in the right direction for learning the technologies and techniques that go into putting your stuff (whatever that stuff might be) online.

5.1 Using Standard Web Technologies

There are many different ways of distributing information on the Internet; indeed, any file that you can use on your computer can also be sent across the Internet, viewable to anybody who has the right program to use it. However, there are a number of technologies that were designed specifically for the Web, and, in particular, for making websites.

HTML

HTML is the markup language that describes a website. It is the core file type for the Web (although it is gradually being phased out by the more complicated and capable XML). A markup language is not a programming language, and, contrary to certain misconceptions, requires no programming knowledge whatsoever (although such experience can be brought to bear in developing a cool site).

Markup languages transform plain-text files, which lack even the most basic formatting features, such as text styling with fonts or colors, into something more. By surrounding blocks of text with markup tags, you can change the way they will be presented when viewed in a browser. The tags are pretty simple to use, and make up the functionality of HTML.

The magic behind HTML is in elements called "tags." Tags are just text, surrounded by greater than (>) and less than (<)

This part would be boldfaced but this part wouldn't be.

No matter what anybody tells you, remember that HTML is really, really easy. There are three primary ways to go about learning it, all three of which have free alternatives (provided you have a computer and Internet access).

1. View Source - go to a website that you like, click on the "View" menu, and choose "View Source." This will show you the HTML that your browser transformed into the page you're viewing.
2. RTFM - Read the Friendly Manuals. Pick up an HTML guide from your local bookstore, or search the web for HTML tutorials.
3. Cheat - download any of the free HTML editors from the web. These range in complexity from simple source editors with buttons that insert the appropriate tags into the text editor, to

full-featured WYSIWYG (What You See Is What You Get) visual editors.

While the third option is fine for beginners or experienced professionals, anyone in between will definitely benefit from learning to do it the old fashioned way. This will allow you greater control over the end result.

Javascript

Javascript is a nifty technology originally produced by Sun Microsystems and Netscape, and has been imitated and reinvented to some degree by several other companies. Almost every modern web browser supports a large subset of the whole Javascript language.

Javascript is a limited programming language that can be inserted within an HTML document. On the server-side, it is simply fed to the requesting computer just like regular HTML; no special processing is done there. However, when a Javascript-enabled web browser receives it, the code is compiled and executed. Javascripts are used for a wide variety of things, ranging from animations and "rollover" effects, to database connections and live chat programs.

Because the source code is sent in plain text to your browser, you can use the "View Source" method (described in the HTML section above) to look at examples. There are also plenty of books describing the core language, as well as the variants developed by other companies. Some of the most advanced HTML editors even have some capabilities for generating Javascripts from simple point-and-click procedures.

Shockwave Flash

Shockwave Flash, a technology developed by Macromedia, is awesome. It provides webmasters and users with a low-cost, modem-friendly method of transmitting complex audio/video animations and website controls. The files are not simple text files like HTML and Javascript; instead, they are built using Macromedia's Flash builder application. (Since Macromedia released the file format for SWF animations, competing builder applications may pop up here and there, but we aren't aware of any at this time. If you are familiar with server scripting languages, you might also be interested in knowing that PHP is capable of generating SWF animations on the fly.)

If you aren't already familiar with what SWF can do, you must see it to believe it. Most current web browsers come with a relatively current version of the viewer, but grab the newest version from www.macromedia.com anyway. Then, check out www.globz.net or www.finalfantasy.com to see it at work. Macromedia also hosts a directory of cool websites using Flash, which is great for wasting an entire week being totally hypnotized by your computer.

5.2 Using Web Editing Applications (or, Cheating is Fair Play)

As mentioned above, this is cheating. (Actually, it's standard industry practice, but we gurus love harassing the new guys.) There are lots of web editing applications, some free, some not free but worthwhile, some neither free nor worthwhile. Before spending money on a non-free

one, be sure to check out some software review sites and see what users say about it.

5.3 The Old Fashioned Way

As mentioned above, since HTML and Javascript are text-based languages, a webmaster who knows (or wants to learn) the real tricks of the trade can use any text editing software (Notepad for Windows, Simpletext for MacOS, Pico for UNIX, etc.) to write web code.

6 Uploading Your Website

In order to publish your newly created site on the Internet, you will use a tool called FTP. Even if your web editor has a publishing feature that simplifies this process, you will still need to know some information about FTP in order to tell that publishing feature what it needs to know in order to work its magic.

6.1 Important Information (No Matter How You Upload)

Even if you use your Web design application's Web publishing feature, you still need to know basic information about your FTP account. Typically, only four or five pieces of information are required. These are:

1. FTP Host, Hostname, FTP Address, or Server Address - These terms (and perhaps several more) all mean the same thing: the Internet address of the computer where your website is served from. This can be in either a hostname (ftp.somedomain.com) format, or IP format (such as 12.47.200.197).
2. Username - your login name for the FTP account.
3. Password - your secret password that protects both your Web files, and your Web hosting provider's server, from unauthorized entry.
4. Start Directory, Remote Directory, or Web Path - These terms all mean the same thing: the directory name on the FTP server's disk drive where the webserver software expects your web files to be located. The most common directory name is "public_html" but this will vary depending on how your hosting company configures their servers.
5. Sometimes, you will also need to enter the Web location or base URL of your website. This is because, in order to allow you to preview your site as you build it, the editor inserts information about where the files are on your computer, instead of where they will be on the Web, into the HTML source code. When you publish the site, the Web editor replaces this information with the correct Internet address for your site.

Aside from that, you might not need to read the rest of this section if you only intend to send your files to the Internet server from such a feature. If you want to use FTP separately, read on.

6.2 FTP Demystified

FTP stands for File Transfer Protocol, which pretty clearly describes its purpose. Unlike HTTP, FTP connections are sustained throughout a login sessions (HTTP simply sends you a file and then closes the connection.) This allows you to login, navigate the disk on the server using commands, upload and download files, and organize your directory layout.

6.3 Binary, ASCII, and Auto Transfer Modes

Most FTP servers and client applications automatically detect the type of a file before

sending/receiving it. (By type, we mean whether it is a binary file or text file.) In this case, you don't have to worry about setting the mode; it's done for you. If some of your files seem to be garbled once they get uploaded, however, you might have to specify the type when you transfer it.

6.4 Commands

While this is by no means a complete reference for using FTP from a command-line client, it should get you started. (Note that many command-line clients have a "help" command that will explain details on various commands.) In each of the following examples, I use placeholder names such as "somefile" to denote the filename supplied to a command. Replace these placeholders with the files, directories, and servers you're working with.

* **open** some.server.com - Usually opens a connection to a new FTP server.

* **cd** some/directory/name - Changes your location on the disk to a new directory. Beginning the directory name with a slash (/) tells your client program to first switch to the disk's root directory, and then go from there. When used anywhere except the beginning of the directory name, it denotes that what follows is a subdirectory.

* **get** somefile - Initiates a download of the file named "somefile." You can also specify the full directory and pathname, such as get somedir/somefile

* **put** somefile - Initiates an upload of the file named "somefile." You can specify the full directory path just like with "get."

* **ls** - list the files in the current directory. You can optionally supply a pathname that you want to view, and it will be listed without actually moving you to that directory.

* **mkdir** somedir - Creates a new directory named "somedir." You can create a directory somewhere other than your current directory location by putting the new directory name at the end of an existing one (such as mkdir /some/existing/dir/newdir)

* **rmdir** somedir - Deletes a directory named "somedir" (if it's empty). You can specify a longer pathname, such as with mkdir (only the last directory in the full pathname will be deleted, not the whole tree.)

* **rm** somefile - Deletes a file named "somefile." As with get and put, you can specify a full pathname to the file (only the file will be deleted, not any of the directories you specified to locate it).

* **cp** somefile somenewfile - Copies the file "somefile" as a new file named "somenewfile." Either "somefile" or "somenewfile" can be replaced with a full directory path to a file location.

In addition, some FTP servers support additional commands that aren't part of the standard FTP command set.

* **mv** somefile somenewfile - Moves the file "somefile" to the name "somenewfile." This is used both for moving files to a new location, and renaming a file but keeping it in the same location. Either filename can be a full path, and the destination file doesn't need to actually contain a filename - it can be just a directory path where you want to move the file to (with the same filename it has in the current location.) Note that moving a file deletes the copy in the original location.

* **less** somefile - some servers will spawn a text viewer called "less," allowing you to read a textfile named "somefile."

Each of these commands (both the standard and nonstandard ones) might have additional parameters which change or enhance how they work. Try typing help commandname and see if it gives you any clues.

6.5 Using FTP Applications

Your computer probably had an FTP program pre-installed when you bought it. Windows users have a command line program (simply called "ftp"). MacOS users will probably have Fetch FTP. UNIX users might have a variety of them installed, the most common ones being "ftp" and the more powerful "ncftp." With the exception of Fetch for MacOS, all of these require that you use the hand-typed commands mentioned above in order to transfer files between your computer and the server.

If you prefer a graphical point-and-click interface, there are plenty available for free on the Internet, as well as some that are not free, but allow you to download them and use them on a trial basis before deciding whether or not to pay for them. Usually, these applications work very much like your computer's normal file manager (Explorer or Finder windows that let you drag-and-drop files between locations). Using this, you enter the 4 critical bits of info discussed at the beginning of this chapter, and then simply point, click, drag and drop your files where you want them to go.

Because the command-line FTP program provided with Windows is particularly user-grouchy, we recommend visiting www.download.com (or your favorite software downloading website) and looking around for a suitable replacement.

6.6 Using Your Web Editor's Publishing Features

A nifty feature inherent in many modern web design programs (such as Macromedia's Dreamweaver) is the publish or synchronize command. This allows you to enter those 4 or 5 critical bits of information just once, and then, as a standard part of editing your website, instruct the editor to synchronize the FTP server with whatever changes you've made on the site files on your own computer.

Because each of the editors handles the configuration and usage of its publishing feature in unique (and sometimes confusing) ways, it's best to consult the manual or Help menu for instructions on setting this up. However, once it's been configured for a given site, subsequent

updates are typically a one-click operation.

7 Getting (and Using) Free Stuff

While the Internet can always benefit from fresh and new content, not everyone has time to fill a whole site with new information on a daily basis. Perhaps you don't have a skilled graphic artist in your pocket, but you want a top-notch visual appeal to your site; maybe your site visitors already have plenty of information available, but you'd like to give them even more without expending extra effort. For whatever reason, it's often convenient to add free stuff to your website.

7.1 Free Content

One of the very nifty things Javascript makes possible is the easy addition of free content. Many websites which update their content on a daily basis (or, even better, up to the minute) allow webmasters to insert Javascript into their own sites, which pulls this content from elsewhere on the web and puts it inline with the rest of your site. This is a lot more common than you might think, and there are sources for this type of content in almost any category you could ask for. With just a little bit of research, you could wind up with a constant supply of self-updating information on your site, with no more effort than a quick copy and paste operation.

The easiest way to locate services like this is to visit your favorite search engine (such as <http://search.directnic.com>) and perform a search for the words "free content," along with one or two words describing the topics you're interested in.

7.2 Free Graphics

There are also individuals and organizations that publish images, photos, and graphics that webmasters can use, either with or without paying a royalty. In fact, when searching for free Web pix, you might decide there are too many! It can take a long time to separate the fluff and scruff from the stuff that's up to snuff. We highly recommend creating a folder in your Web browser's bookmarks tool specifically for sites like this; most of the sites that have good freebies have lots of them, and you don't want to forget where they were.

Just like with the free content, free images can be found by doing a search at <http://search.directnic.com> or any other search engine.

7.3 Good Manners & Legal Matters

Using content, graphics and other digital content that somebody worked hard to produce without their permission is rude, and sometimes (in the case of copyrighted works) illegal. Don't do it. If the author/artist doesn't say one way or the other whether it's okay to use their work, email and ask them.

7.4 Webmaster Resources

The term "webmaster" was probably coined partly because of ego, and partly because of the vast variety and depth of knowledge required to become a really good one. Many of the best webmasters serve the additional duties of programmers, writers, visual artists, marketing experts, layout editors, troubleshooters, and server admins, in addition to being experts in whatever industry or field their website happens to be about.

7.5 Books & References

If you intend to make a career, or even a long-term hobby, out of being a webmaster, you're going to wind up at the bookstore. There are so many technologies, and so many authors/publishers covering them, you can easily find yourself employing the EMMM (Eenie, Meenie, Miney, Moe) consumer tactic just to get out of the bookstore.

The type of book you want depends on what you already know. Many books have a rating on the front or back cover or spine, denoting the level and areas of knowledge suggested by the authors as "prerequisites" for learning from that book. The foreword will also give you tips about the recommended audience, as well as giving insight about the "voice" the author uses in explaining their topics. Prices for books covering technical topics vary wildly; I've personally spent \$15.99 on some really great books that I still use years later; I've also flushed upwards of \$60.00 on books that immediately served me by keeping my computer monitor at eye level. Other shoppers, bookstore employees, and Internet message boards are great ways to make good purchasing decisions. Remember that the following criteria are essential to finding the right book for you:

- * What level of knowledge is expected for learning from this book?
- * What specific uses of the technologies being discussed does this book focus on most?
- * How well is the publisher respected among technology experts?
- * What version of the technologies being discussed were available when the book was published? Are those versions still commonly in use?
- * What computer platforms does the author use for the majority of their examples?

7.6 Free Scripts

If your website could use some extra spice, or more powerful functionality, but you neither have nor want the programming experience required to create your own program code, maybe some generous programmer has already published the scripts you're looking for and will let you download them for free use. Like free content, this is actually a very common occurrence. There are literally hundreds of scripts available in almost every programming language used on the web, all available for free, ranging from the amusing and bizarre toys, to the

industrial-grade web applications. Look around and see what you can get for free! directNIC's free and bannerless hosting plans allow you to use Javascripts on your website; other hosts might allow you to use other languages as well.

7.7 Where to Download Software

There are a number of reasons why you might be hunting for applications to help you be a better webmaster. Maybe a better FTP application would make site updates easier, or even automatic. Perhaps you want to keep copies of all the common Web browsers handy, so you can make sure your site looks right for all your users. Maybe you need graphics programs, animators, or tools to generate imagemaps. All this and more can be found and downloaded on the Internet, many for free, others for a cost.

Because of the software licensing revolutions that occurred in the '80s and '90s (and continue today), computer users have a great advantage in selecting software that they intend to purchase. Back when the Internet was first entering into our homes, independent programmers found that the only way to compete against brand-name boxed software you could buy from a store was to allow people to download free, limited-use versions of their products. Lots of websites cashed in on this trend, serving as central repositories where Internet window-shoppers could browse all the competing software vendors' products at once, comparing screen shots, feature sets, and more.

Today, this trend has cemented itself as the standard method of choosing a software package. Indeed, nowadays it's downright silly to buy a boxed software package from a store unless you've already used it; why risk the money without knowing whether you like the product?

So here we will offer a few websites that provide downloadable software without charge, without even the need to register as a user at that site. Again, some of the featured software on these sites is not free, but much of it is, and almost all of it is available in a limited demo version. Happy shopping!

Software for (Almost) Any Operating System

* <http://www.tucows.com> - TUCOWS (pronounced Two Cows) stands for "The Ultimate Collection of Windows Software," which was (once upon a time) all you could find there. Now, however, they have software for plenty of different platforms, including BeOS or your handheld PDA.

* <http://www.download.com> - C|Net's software repository, which is used by many software publishers as a primary download location.

Software for Microsoft Windows

* <http://www.winfiles.com> - The (mostly?) official Windows shareware download site.

* <http://www.davecentral.com> - Offers both personal computing news and software archives.

Software For Macintosh OS (a.k.a. MacOS)

* <http://www.harmony-central.com/Software/Mac/> - News and downloads for Mac users

Software for Linux/UNIX

* <http://www.freshmeat.net> - A staple of any UNIXer's diet, this is by far the most popular UNIX download site.

* <http://www.linux.com> - Everything Linux.

8 Conclusion

Thank goodness for freely available software and information! Without it, the Internet would be a very different place, far less accessible and without the great opportunities that are currently available for both businesses and individuals alike.

We hope that you have found this guide to be helpful and informative. This is one of a series of guides published by directNIC, Ltd intended for direcNIC users.