

Installation Guide

iPlanet Web Proxy Server

Version 3.6 for NT

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Welcome to iPlanet Web Proxy Server and the Internet. Netscape Communications Corporation provides open software that lets people and companies exchange information and conduct commerce over the Internet and other global networks. iPlanet Web Proxy Server is a high-performance server software product designed for replicating and filtering access to web-based content.

What's in This Book?

This book provides information about the software and hardware required to install your proxy server. It also tells you how to deploy and install your server.

Conventions Used in This Book

These conventions are used in this book:

Monospaced font. Monospaced type is used for text that you should type. It is also used for examples of code, directories, and file names.

Italic. Italic text is used to introduce new terms.

|. The vertical bar is used as a separator for user interface elements. For example, “choose Server Status | Log Preferences” means you click the Server Status button in the Server Manager and then click the Log Preferences link.

Contacting Technical Support

For product-specific Technical Support assistance, please see the Product Support Page for iPlanet Web Proxy Server at:

http://www.iplanet.com/support/technical_resources/proxy

For general Technical Support assistance, please see the iPlanet Technical Support Page at:

<http://www.iplanet.com/support>

Other useful iPlanet information can be found at the following Internet locations:

- iPlanet release notes and other documentation:
<http://docs.iplanet.com/docs/manuals/>
- iPlanet product status:
http://www.iplanet.com/support/technical_resources/
- iPlanet Professional Services information:
<http://www.iplanet.com/services>
- iPlanet developer information:
<http://developer.iplanet.com/>
- iPlanet learning solutions:
<http://www.iplanet.com/learning/index.html>
- iPlanet product data sheets:
<http://www.iplanet.com/products/index.html>

Before You Install

The following sections discuss the information you need to know before you install iPlanet Web Proxy Server.

Supported Platforms

iPlanet Web Proxy Server 3.6 for Windows NT runs on these platforms:

- Windows NT Server version 4.0, running Service Pack 6. (available from Microsoft's web site)
- Windows 2000 Server and Advanced Server running Service Pack 1. (available from Microsoft's web site)

Hardware and Software Requirements

iPlanet Web Proxy Server requires specific software and hardware. Before you can install the server, your computer must have the following:

- Netscape Navigator 4.04 or later (provided with the proxy server)
- A Domain Name Service (DNS) - For more information on DNS, see "Making Sure DNS is Running" on page 10.
- Windows NT or Windows 2000 server with a Pentium processor
- CD-ROM drive
- Minimum 32MB RAM; 64MB or more recommended for machines that will handle heavy traffic

- 20MB hard disk space for installation, plus a minimum of 200MB hard disk space for the cache

Hardware Sizing Recommendations

When choosing the hardware for your proxy server, you should consider the number of incoming connections and the average transaction time of those connections. You probably will not know these numbers until your proxy server has been running for a while. Until then, you can use a typical proxy server setup. Table 1-1 describes the hardware in a typical proxy server setup.

Table 1-1 Typical Proxy Server

Variables	Entry-level Proxy Server	Typical Proxy Server
Users	Up to 1,500	1,500-3,000
Operating System	Entry to mid-level NT server	High-end NT server
CPU	120+ MHz	1-2 Pentium Pro
RAM	Minimum 32 MB; 64-128 MB for heavy traffic	128-256 MB
Server Hard Disk	Minimum 20 MB; 100 MB recommended	200 MB
Cache	2 to 4 GB	5 to 9 GB

A proxy server running on a Windows NT system can generally support up to 600 users per server. Of course, the total number of requests generated by the users is the real sizing factor.

Table 1-1 shows the minimum amount of RAM you will need for your proxy server. You will generally need more RAM as your user base expands. Table 1-2 shows RAM sizes based on the number of users going through your proxy server. Large deployments should also consider a logging file system or non-volatile RAM to allow the server to perform asynchronous writes to the disk.

Table 1-2 Recommended RAM sizes

Number of users	RAM (MB)
0-300	32
300-500	64

Table 1-2 Recommended RAM sizes

Number of users	RAM (MB)
500-1000	96
1000+	128

The speed of the CPU does not affect performance as much as RAM and disk size. The CPU is normally not a bottleneck; however, proxy performance may scale with more or faster CPUs.

When determining the overall cache size, you should budget 1 to 20 MB per user. After deployment, continue to monitor the cache performance for increases in the cache hit ratio, and continue to increase your cache size until the cache hit ratio stops increasing.

When selecting a disk size for your cache, remember that smaller disks hold less but seek faster, while larger disks hold more but seek slower. Both options will demand the same bandwidth.

For the best performance, you should run iPlanet Web Proxy Server on a dedicated machine.

Other Technical Requirements

Once you have the proper hardware and software necessary to install iPlanet Web Proxy Server, you should make sure that you meet the following requirements:

- You know the host name and IP address of your server computer.
- Your server has a DNS alias. For information on creating a DNS alias for your server, see “Creating a DNS Alias for the Server” on page 11.
- You have two port numbers - one for the administration server and the other for the proxy server. For information on choosing port numbers for your server, see “Choosing Unique Port Numbers” on page 11.

Making Sure DNS is Running

DNS is the software used by computers on a network to translate standard IP addresses into host names. The software generally retrieves this information from a remote DNS server or a table maintained on the same computer. Without DNS, the proxy cannot connect to any remote hosts.

A fully qualified host name is a name for a specific server in the form `machine.subdomain.domain`, which is translated into a dotted Internet Protocol (IP) address by DNS. For example, `proxy.iplanet.com` is the machine *proxy* in the subdomain *iplanet* and the domain *com*.

The *IP address* is a set of four numbers separated by periods that specifies the actual location of a machine on the Internet or in an internal TCP/IP intranet. Each computer on the network has a unique IP address (sometimes called a *dotted quad*), but usually that IP address is given a host name for convenience. For example, the host name `www.iplanet.com` has the IP address `198.95.251.30`.

When you install iPlanet Web Proxy Server, some items on the installation forms require a server host name or an IP address.

To make sure DNS is running on your computer,

1. At the DOS prompt, type `nslookup` and press Enter.

The `nslookup` program responds by printing the name and address of the DNS server:

```
Default Server: dns.iplanet.com
Address: 198.95.249.78
```

If `nslookup` cannot find an authoritative answer, it prints the names of any servers that might have an authoritative answer:

```
Non-authoritative answer:
Name:      www.mysite.com
Address: 198.95.251.30
```

2. To exit `nslookup`, type `Control-c`.

Creating a DNS Alias for the Server

If your server will run on one machine among many in a network, you or your system administrator should set up a DNS alias (such as *proxy*). A DNS alias is a host name that points to another host name. Your machine can have only one real name, but it can have more than one alias. Creating a DNS alias allows you to change the actual host name or IP address of the server machine without having to change the proxy settings for the clients that use the proxy. For information on how to set up an alias, see the system administration manual for your platform.

NOTE It is strongly recommended that you use a dedicated user account for the proxy server.

Because the proxy server is configured through a web-based administration server, you might also want to create another user account for the administration server. You can also run the administration server as administrator and then start and stop the server when you aren't using it to configure the proxy server.

Choosing Unique Port Numbers

The proxy server uses two port numbers: one for the proxy server itself and another for the administration server. You specify these two port numbers during installation, but you can also change the port numbers after installation. Remember that other 3.0 iPlanet servers located in the same directory as your proxy server will use the same administration server port.

The port numbers must be unique for each service on a computer. Port numbers for all network-accessible services on your machine are listed in the file `winnt35\system32\drivers\etc\services`. Industry standards for many kinds of ports already exist; for example, the standard HTTP port number is 80; for Telnet, the standard port is 23; and for HTTPS, the standard port is 443. There is no standard port number for proxy servers; however, commonly used ports are 8000 and 8080. If you are unsure which port number to use, 8000 or 8080 is probably a good choice.

The administration server is typically run on a random port number above 1024. This makes it harder for unauthorized users to determine where your administration server is.

Before you choose a port number, make sure the port you choose isn't in use.

Other Technical Requirements

Installing iPlanet Web Proxy Server

This chapter tells you how to install your iPlanet Web Proxy Server. It also explains how to migrate from a previous version of the proxy server and to install multiple proxy servers.

Installing iPlanet Web Proxy Server

After you've installed the required software, you can install iPlanet Web Proxy Server. You can install a new proxy, replace an existing proxy server, or install more than one proxy.

NOTE While it is possible to install your proxy server on the same machine as another iPlanet server, it is not recommended that you do so. Running two or more iPlanet servers on the same machine will cause a significant impact on the servers' performance.

If you're already running a proxy server, you must install the new proxy server to a different port. For example, if you are replacing a proxy that listens to port 8080, you might first install the new proxy server on port 8081, assuming that port is available. After the new proxy server is properly configured, shut down the old proxy server and then change the new proxy to use port 8080.

To install iPlanet Web Proxy Server,

1. Put the CD-ROM in the drive.
2. Choose Run from the Start Menu.
3. In the dialog box that appears, type the path to the `setup.exe` file.

4. Press Enter.

The iPlanet Web Proxy Server Installation dialog box appears.

5. Click Yes to continue. This unpacks all the files and runs the Installation Wizard, which takes you through the installation process. During this process you need to specify the following items:

NOTE If you already have a SuiteSpot 3.x server installed on your machine, the installation wizard will not prompt you for the destination directory, directory service, administrator's username and password, or administration server port.

- Destination Directory—This is the directory into which the proxy server will be installed. You can either choose the default directory, `C:\Netscape\SuiteSpot`, or browse for another directory.
- Directory Service—This is the service you will use to store user and group information. You can use either an LDAP-based service, such as iPlanet Directory Server, or you can use the local directory service. If you choose an LDAP-based service, you need to enter the directory server's name, its port, and its Base Distinguished Name. (The Base Distinguished Name is the directory under which all relevant user and group information is stored. It has the form `o=organization, c=country`. For instance, `o=iPlanet, c=US`.)
- Administrator's Username and Password—These are the username and password you will need to access the administration server.
- Administration Server Port—This is the port address that the administration server will use.
- Cache Partition Root—This is the location of your proxy server's cache. You can choose either the default directory, `D:\Netscape\SuiteSpot\Proxy`, or browse for another directory.
- Proxy Server Port—This is the port address that the proxy server will use. The standard proxy port is 8080.

Migrating from a Previous Version of the Proxy Server

This section tells you how to migrate from an earlier version of iPlanet Web Proxy Server. The migration process supports migration from Netscape Proxy Server 2.5 and 3.5 releases to iPlanet Web Proxy Server 3.6.

To migrate from an earlier version of the proxy server,

1. Shut down your server.
2. Follow the directions in “Installing iPlanet Web Proxy Server,” on page 13 to install the new 3.6 server into a separate directory.
3. Start the administration server.
4. On the Server Administration page, click the “Migrate from previous version” button.
5. Type the absolute path to the directory where the older version of the server is installed.
6. Click the Find Servers button.
7. Select the checkbox next to the server for which you want to import the configuration.
8. Click OK.

The installation program transfers the configuration information from the old server to the new one. This process can take a few minutes depending on the complexity of your configuration.

After this process, you will have two working servers (the old server will be turned off).

CAUTION If you are migrating a Netscape Proxy Server 3.5 to iPlanet Web Proxy Server 3.6, refer to the release notes for important information on the migration process.

Installing Multiple Proxy Servers

Once you have one proxy server running on your computer, you can install another proxy server without going through the installation program.

Each proxy server you have installed can run on any TCP/IP port on your system, but you cannot run two servers on the same port at the same time. Your proxy server software license allows you to have as many proxy servers as you want on one computer. With multiple servers on your computer, you will see several subdirectories in your server root directory; each of these servers can be managed from the Server Administration page.

To install another proxy server,

1. On the Server Administration page, click the “Create New iPlanet Web Proxy Server 3.6” link. The iPlanet Web Proxy Server Installation form appears.
2. Enter values for the following:
 - Server name—Type the fully qualified domain name for your server. If you are installing a second server for a different domain, enter the domain here.
 - Server port—Type the port number to which you want this server to listen.
 - Server identifier—Type the server identification the administration server will use for your server. This is the name that appears in the Server Selector and becomes part of the name for the main directory for this new server. All server instances on the same machine must have a unique server identifier.
 - DNS behavior—Select whether you want the proxy server always to resolve host names, to resolve them for access control, or never to resolve them.
 - Log format—Select whether you want to use common, extended, or extended-2 log format. For more information on these formats, see the *Administrator’s Guide*.
 - Proxied protocols—Select which protocols (HTTP, FTP, Gopher) your proxy will service.
 - SSL tunneled protocols—Select which secure protocols (HTTPS, NNTP) your proxy server will tunnel.
 - Caching behavior—Specify whether caching is enabled for your proxy server. If you do enable caching, specify the directory where cached files will be stored. For more information on caching, see the *Administrator’s Guide*.
 - Cache size—Select the size of your cache. For more information on cache size, see the *Administrator’s Guide*.

- Cache sections—Select the number of sections that will be in your cache. For more information on cache sections, see the *Administrator's Guide*.
 - Cache directories per section—Select the number of subdirectories that will be within each section in your cache. For more information on cache directories, see the *Administrator's Guide*.
 - HTTP caching behavior—Select whether you want your proxy server to cache HTTP documents. If so, specify the refresh and expiration policies. For more information on caching HTTP, see the *Administrator's Guide*.
 - FTP caching behavior—Select whether you want your proxy server to cache FTP documents. If so, specify the FTP refresh policy. For more information on caching FTP, see the *Administrator's Guide*.
 - Gopher caching behavior—Select whether you want your proxy server to cache Gopher documents. If so, specify the Gopher refresh policy. For more information on caching Gopher, see the *Administrator's Guide*.
3. Click OK.

Troubleshooting Installation

Troubleshooting

This section describes common installation problems and solutions.

You accidentally denied all access to the Administration forms.

Log in as administrator or with the proxy's user account. In the server root directory, edit the `magnus.conf` file. See the *Administrator's Guide* for more information on this file.

You don't remember on what port your administration server is running.

Look in your `ns-admin.conf` file, which is in the `admserv` directory under your iPlanet server directory. In `ns-admin.conf`, you will find a Port entry that specifies on what port your administration server is located. You can change this value if you want your administration server to run on a different port, but make sure you restart the administration server after you change the value.

Your administration server responds "Unauthorized host" when you try to connect to it.

Open up your administration server to all sites by going into the Administration section of your NT registry and deleting the lines for Hosts and Addresses (either of these might not be present). Then restart your administration server (go into the Services control panel and stop or start the iPlanet Administration or iPlanet Administration Server service). You will then be able to get back into the administration server, where you can try new settings for your host and address restrictions.

You have forgotten the password to your administration server and you can't log in to your administration pages.

Go into your `ns-home` directory, and into the `admserv` directory under that. You should find an `admpw` text file containing a single line of text something like this:

```
admin:ln0VeixulqkmU
```

The first part of the line is the name of your administration account (usually just admin), and the second part is your encrypted administration password. Edit this file to remove the encrypted password so that your file looks like this:

```
admin:
```

Then shut down your administration server, bring it back up again, and log in to your administration server, but don't give any password. The server should let you in, at which point you can go to the appropriate configuration page to set a new administration password.

NOTE Because it is so easy to change the administration password this way, you should periodically make certain that your administration password file and your web server's configuration files cannot be edited by anyone, and that only trusted people have access to them. (By default these files cannot be edited by anyone, but you should verify this fact occasionally.)

You don't have access to the proxy.

Log in as root or the proxy's user account. In the server root directory, edit the `obj.conf` file and remove the following lines:

```
<Client dns="[wildcardpattern]" ip="[wildcardpattern]">
PathCheck fn=deny-service
</Client>
```

[wildcardpattern] is a shell expression that matches your DNS or IP address. You can also edit the wildcard patterns so that your user account information isn't included. To deny service to everyone *except* a select group, use `*~` before the wildcard pattern (for example, `*~*iplanet.com` denies service to everyone except those from the `iplanet.com` domain). See the *Administrator's Guide*, for more information on wildcard patterns.

Clients can't find the proxy server.

First try using the host name. If that doesn't work, use a fully-qualified name (in the form `proxy.subdomain.domain`). If that doesn't work, use the dotted quad IP address.

The proxy is slow, and transfers take too long.

The proxy computer might need more RAM to handle the load, or, if other applications are on the proxy machine, they might be degrading proxy performance by using most of the computer's memory.

You can also reduce transfer time by configuring the cache refresh setting. See the *Administrator's Guide* for more information on the cache refresh setting.

When installing my server, I get a message saying not to interrupt while performing the install, but the program doesn't install anything.

Be sure to click on the "Install now" link on the page that says "Do not interrupt." The "Do not interrupt" message refers to the time after the user has clicked install.

When installing my server on my Windows NT machine, I get the following error message:

confhttp: LODCTR returned error code 112

The LODCTR utility is used to set up performance monitoring-related keys in your Windows NT registry. Error 112 means that it ran out of space either on your hard disk or in the registry.

If during installation on a Windows NT machine, you see an error message similar to the one above, make sure that you have plenty of free space on your hard disk; if you do, then Windows NT may have filled up its registry. You can check the registry by going into the System control panel and (on NT 3.51) clicking the "Virtual Memory" button or (on NT 4.0) going to the "Performance" tab and clicking "Change." The window that appears will show you the current and maximum registry sizes. If the current size is near the maximum size, then raise the maximum setting, reboot your machine, and install your iPlanet server again.

If the error continues to appear, remove entries from your Windows NT registry. Run the program "REGEDT32.EXE" (which comes with Windows NT), and delete these two keys and anything below them:

```
\HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Services\proxy3.5
```

```
\HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\proxy3.5
```

Then close REGEDT32.EXE and start the installation over; it should work normally.

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