

Tru64 UNIX Best Practice

Configuring the Squid Proxy/Caching Server Using Internet Express

March 2002

Product Version: **Internet Express Version 5.8**

This Best Practice describes how to use Compaq Internet Express to set up and configure the Squid Proxy/Caching Server for a *Tru64*[™] UNIX system.

Compaq Computer Corporation
Houston, Texas

Contents

Setting Up and Configuring the Squid Proxy/Caching Server

Is This Best Practice Right for You?	1
Before You Begin	1
Applying the Best Practice	2
Obtain the Internet Express Kit	2
Install the Squid Proxy/Caching Server and Administration Utility	2
Configure the Squid Proxy/Caching Server	3
Reinitialize the Disk Cache	3
Manage the Squid Proxy/Caching Server	4
Verifying Success	4
Troubleshooting	5
Alternative Practices	5
Comments and Questions	6
Legal Notice	6

Setting Up and Configuring the Squid Proxy/Caching Server

See the Tru64 UNIX Best Practices Web page for more information about Best Practices documentation.

Is This Best Practice Right for You?

Not all Best Practices apply to all configurations, so you must be sure that it is appropriate for your system and circumstances. To use this Best Practice, you must meet the requirements described in the following table:

Requirement	Description
Operating System	Tru64 UNIX Version 5.0A or higher
Product Version	Internet Express Version 5.8 or higher

If you do not meet the previous requirements, see *Alternative Practices* for information.

Before You Begin

Before you apply the Best Practice for Setting Up and Configuring the Squid Proxy/Caching Server, you must understand some background information and perform some preliminary tasks.

The Squid Proxy/Caching Server is a high-performance proxy/caching server that supports FTP, Gopher, and HTTP data objects. Squid tends to be faster than other proxy/caching servers, because it maintains linked objects in RAM, caches DNS lookups, and supports nonblocking I/O and negative caching of objects.

Squid consists of a main server program called `squid`, a DNS lookup program called `dnserver`, a program for retrieving FTP data called `ftpget`, and some management and client tools. When Squid starts up, it spawns a configurable number of `dnserver` processes, each of which can perform a single, blocking DNS lookup. This reduces the amount of time the cache waits for DNS lookups.

Applying the Best Practice

Before you configure the Squid Proxy/Caching Server, be sure to follow the recommendations in *Before You Begin*.

The Internet Express CD-ROM labeled "Installation and Documentation" contains an Administration utility, as well as other Internet software. To install and configure the Squid Proxy/Caching Server, you should:

- *Obtain the Internet Express Kit.*
- *Install the Squid Proxy/Caching Server and Administration Utility.*
- *Configure the Squid Proxy/Caching Server.*
- *Reinitialize the Disk Cache.*
- *Manage the Squid Proxy/Caching Server.*

Obtain the Internet Express Kit

Compaq includes the Internet Express CD-ROMs with Tru64 UNIX *AlphaServer*[™] systems. If you need the Internet Express CD-ROMs, you can contact your Compaq representative. The part number for the Internet Express kit is QB-3NCAA-SA.

Install the Squid Proxy/Caching Server and Administration Utility

To install the Administration utility:

1. Follow the instructions in the *Internet Express for Tru64 UNIX Installation Guide* for mounting the Internet Express CD-ROM and running the `ix_install` installation script.
2. During the installation, choose the Administration utility and the Squid Proxy/Caching Server subsets (`IAEADMxxx` and `IAESQDxxx`, respectively, where `xxx` is the Internet Express version number). These choices will implicitly select prerequisite subsets from the Internet Express kit.

When the installation has completed, the Administration Web server is set up on your system with default configuration settings and permissions.

3. Use a Web browser on the local host to connect to the Administration utility Web server running on port 8081. Use the following URL:

`http://localhost:8081`

4. Log in to the Administration utility by specifying the user name `admin` and the password you selected at the beginning of the Internet Express installation.

Configure the Squid Proxy/Caching Server

Because system needs vary, Internet Express does not install a fully configured Squid Proxy/Caching Server. You might need to edit some of the values in the Squid configuration file, `/usr/internet/squid/etc/squid.conf`, to meet the needs of your system. For example, you might need to edit the `cache_mem` and `cache_swap` values in `squid.conf` and specify the amount of RAM memory and hard disk space, respectively, to devote to caching.

You can find guidelines to configure and run Squid on an Internet Express system in the `/usr/internet/docs/squid` directory. The documentation includes:

- `QUICKSTART`—Describes how to specify the values in the `squid.conf` file that must be set to reflect the needs of your system. The document includes information on configuring a parent cache, the firewall, local domains, cache memory, access control lists, and other information.
- `HTTP-codes.txt`—Lists the Squid caching error codes and their meanings.

Reinitialize the Disk Cache

To reinitialize the disk cache for the Squid Proxy/Caching Server, follow these steps:

1. On the Administration utility main menu, choose `Manage Components`.
2. Under `Proxy` on the `Manage Components` menu, choose `Squid Proxy/Caching Server`.
3. On the `Squid Proxy/Caching Server Administration` menu, choose `Reinitialize the Disk Cache`.
4. Click on `Submit` to remove all pages from the disk cache.

Manage the Squid Proxy/Caching Server

To manage the Squid Proxy/Caching Server from the Administration utility, follow these steps:

1. On the Administration utility main menu, choose Manage Components.
2. Under Proxy on the Manage Components menu, choose Squid Proxy/Caching Server.
3. On the Squid Proxy/Caching Server Administration menu, choose Cache Manager Interface.
4. On the Cache Manager Interface form, specify the Cache Host, Cache Port, Password, and URL of the cache you will manage.
5. Use the Operation list to choose an operation and click on Submit. Only the Shutdown Cache and Refresh Object operations perform an action; the rest display statistical information only.

When a Squid Proxy/Caching Server operation completes, a statistics report or status screen appears.

- Use the Submit button at the top of the page to refresh the statistical information for the current operation (shown in the list), or request another statistics report by choosing an operation from the list and clicking on Submit.
- To return to the Cache Manager Interface form, choose Empty Form from the list and click on Submit.

See the Squid Proxy/Caching Server Administration chapter in the *Internet Express for Tru64 UNIX Administration Guide* for further information.

Verifying Success

After you apply the Best Practice for Setting Up and Configuring the Squid Proxy/Caching Server, you can verify whether it was successful by following these steps:

1. Ensure the Squid Proxy/Caching Server is running by executing the following command:

```
# /usr/internet/squid/bin/squid -k check
```

If the exit status of squid is 0, squid is running.

2. Verify that pages can be fetched with the provided client utility, using the following command:

```
# /usr/internet/squid/bin/client http://127.0.0.1 > test
```

Once complete, the newly created test file will contain the contents of the Internet Express introductory page.

3. Use the Administration utility to Display Access Statistics. Information about the test should be shown.

If the Best Practice was not successful, see *Troubleshooting* for information about identifying and solving problems.

Troubleshooting

If you determine that the Best Practice was not successful, as described in *Verifying Success*, use the following table to identify and solve problems:

Problem	Possible Solutions
The IAESQD subset is not installed.	Review the installation steps described in the <i>Internet Express for Tru64 UNIX Installation Guide</i> .
Squid Proxy/Caching Server will not start.	Check the Squid log files in <code>/usr/internet/squid/logs</code> , particularly the <code>cache.log</code> , which will contain any errors encountered during startup and other information.
Additional problems.	See the Squid Proxy/Caching Server frequently asked questions (FAQs) found at http://www.squid-cache.org/FAQ

Alternative Practices

Although this Best Practice is the recommended method for Setting Up and Configuring the Squid Proxy/Caching Server, if your system does not meet the requirements described in *Is This Best Practice Right for You?*, you can use an alternative method.

Squid documentation and frequently asked questions (FAQs) are available from the Squid homepage:

<http://squid-cache.org>

Comments and Questions

We value your comments and questions on the information in this document. Please mail your comments to us at this address:

`best_practices@zk3.dec.com`

Legal Notice

Compaq, the Compaq logo, AlphaServer, and Tru64 are trademarks of Compaq Information Technologies Group, L.P. in the U.S. and/or other countries.

Microsoft, Windows, and FrontPage are trademarks of Microsoft Corporation in the U.S. and/or other countries. UNIX and The Open Group are trademarks of The Open Group in the U.S. and/or other countries. All other product names mentioned herein may be trademarks of their respective companies.

Confidential computer software. Valid license from Compaq required for possession, use, or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Compaq shall not be liable for technical or editorial errors or omissions contained herein. The information is provided "as is" without warranty of any kind and is subject to change without notice. The warranties for Compaq products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty.