

# Tru64 UNIX Best Practice

## Changing the Host Name Permanently

**Revised April 2002**

**Product Version:**                    **Tru64 UNIX Version 5.1A and higher**

This Best Practice describes how to change a system's host name on a permanent basis.



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# Contents

## Changing the Host Name Permanently

Is This Best Practice Right for You? .....	1
Before You Begin .....	2
Be Prepared to Answer These Questions .....	2
What is your system's root password? .....	2
What is your system's current host name? .....	2
What is your system's new host name? .....	3
What is your system's IP Address? .....	3
How many Network Interface Cards are used in your system? .....	3
Applying the Best Practice .....	4
Verifying Success .....	6
Troubleshooting .....	6
Alternative Practices .....	7
Comments and Questions .....	9
Legal Notice .....	9



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## Changing the Host Name Permanently

There are several scenarios in which a system host name may need to change; here are some of them:

- The system may be relocated from one facility to another.
- You may need to upgrade your system by swapping an older system for a newer one and want to retain the same name.
- You may inherit a system from another user.
- The current system name may cause a conflict with another system.

This Best Practice document lets you change the system host name running Tru64 UNIX Version 5.1A and higher.

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 5.1A and higher.  Follow the instructions under Alternative Practices for Version 5.1 and earlier.
Impact on Availability	We recommend that you reboot the system as part of the process to change the host name. The system will not be available at that time.
Assumption	This Best Practice assumes that the system is a single system, not a cluster.

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

## Before You Begin

Before you apply the Best Practice for Changing the Host Name Permanently, you must understand some background information and perform some preliminary tasks.

- Your system's host name is defined when the Network Interface Card is configured.
- A system may have multiple Network Interface Cards, but only one corresponds to the system's host name.
- You will need to know your system's Internet Protocol (IP) address.
- Although you can change your system's host name by using the `hostname` or `uname` commands, the effect is temporary. These commands change only the value in the running kernel. The system reverts to its previous host name when it is rebooted.
- You will need to reboot your system to change the host name permanently. Be sure to warn users and give them adequate time to save their files, exit their applications, and log off.

## Be Prepared to Answer These Questions

- What is your system's root password?
- What is your system's current host name?
- What is your system's new host name?
- What is your system's IP Address?
- How many Network Interface Cards are used in your system?

### What is your system's root password?

Only the superuser can run the applications that will change the system's host name and shut down the system. Either log in as root or use the `su` command to become the superuser.

### What is your system's current host name?

You can determine the system's host name if you do not already know it by using the `uname -n` command, but be sure that you are not in an `rlogin` or `telnet` session at the time.

```
# uname -n  
oldname.aaa.bbb.ccc
```

The value that the `uname` command returns has the form: `oldname.aaa.bbb.ccc`, where `oldname` is the host name and `aaa.bbb.ccc` is the fully qualified domain name.

### What is your system's new host name?

Be prepared to supply a unique host name. The length of the host name is determined by the value of `SYS_NMLN-1`. This value can be changed by the superuser and differs depending on the implementation of your system. You can find the value of the `SYS_NMLN` by using the `grep` command, as follows:

```
# grep SYS_NMLN /usr/include/sys/utsname.h | grep define
#define _SYS_NMLN          32
#define SYS_NMLN          _SYS_NMLN
```

In this example, the host name is limited to 31 characters in length.

Use the `ping` command to test whether another system with the same name already exists on the network. Consider this example, which searches for a system named `newname`.

```
# ping -c 1 newname
ping: unknown host newname
```

It is likely that there is another system named `newname` on the network if `ping` responds with a different message.

### What is your system's IP Address?

You can use the `ping` command to find your own system's IP address.

```
# ping -c 1 oldname
PING oldname.aaa.bbb.ccc (IPaddress): 56 data bytes
64 bytes from IPaddress: icmp_seq=0 ttl=64 time=1 ms
```

```
----oldname.aaa.bbb.ccc PING Statistics----
1 packets transmitted, 1 packets received, 0% packet loss
round-trip (ms)  min/avg/max = 1/1/1 ms
```

### How many Network Interface Cards are used in your system?

Your system may be equipped with multiple Network Interface Cards (NICs). If so, you will need to identify which NIC is associated with the host name. Use the SysMan Menu's Set up Network Interface Cards application

to identify the NIC. This procedure is similar to the one specified in *Applying the Best Practice*.

1. Invoke the Set up Network Interface Cards application.  

```
# /usr/sbin/sysman interface
```
2. Select the first configured NIC card from the list of available **Interfaces**, then select **Configure**.  
The Configure the (Ethernet, FDDI, ATM, Memory Channel, or Token Ring) Interface dialog box opens.
3. Select **Cancel** if the **Host Name** field does not contain the current host name; this dialog box closes.
4. Repeat steps 2 and 3 until you find the current host name.
5. Make a note of this NIC card. This is the card that you will change when you apply the Best Practice.
6. Select **Cancel**.  
The Configure the (Ethernet, FDDI, ATM, Memory Channel, or Token Ring) Interface dialog box closes.
7. Select **Cancel**.  
The Set Up the Network Interface Card dialog box closes.

## Applying the Best Practice

Before you begin to change the host name, be sure to follow the recommendations in *Before You Begin*.

1. Log in as root.
2. Invoke the Set up Network Interface Cards application.  

```
# /usr/sbin/sysman interface
```
3. Select the NIC card associated with the host name from the list of available **Interfaces**, then select **Configure**.  
The Configure the (Ethernet, FDDI, ATM, Memory Channel, or Token Ring) Interface dialog box opens.
4. Rename the entry in the **Host Name** from *oldname* to *newname*, taking care not to change the domain name from the first period to the end of the field.  
For example, change the entry in the **Host Name** field from *oldname.aaa.bbb.ccc* to *newname.aaa.bbb.ccc*.

5. Select **OK**.

The Configure the (Ethernet, FDDI, ATM, Memory Channel, or Token Ring) Interface dialog box closes.

6. Select **OK**.

The Set Up the Network Interface Card dialog box closes.

7. Optionally edit and change the file name of the file corresponding to *oldname* (it may be in uppercase characters) in the `/usr/sys/conf` directory; this example shows one method for doing this.

```
# cd /usr/sys/conf
# ls
GENERIC
...
OLDNAME
# sed -e "s/OLDNAME/NEWNAME/" OLDNAME > NEWNAME
# rm OLDNAME
```

---

**Note**

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This step is provided solely for the sake of consistency. It has no bearing on the host name change.

---

8. Shut down and reboot the system with the `shutdown -r` command.

Be sure to warn users and give them adequate time to save their files, exit their applications, and log off.

The following is an example that reboots the system in one hour and displays a message.

```
# /usr/sbin/shutdown -r +60 \  
System going down in 1 hour! Save your files and log out!
```

9. Edit the root `.profile`, `.kshrc`, `.login`, `.cshrc`, and `.rhosts` files as needed to reference the new system name; pay particular attention to the setting of the `DISPLAY` and `PS` environment variables.

10. Inform other users of the system name change; they may need to edit their `.profile`, `.kshrc`, `.login`, `.cshrc`, and `.rhosts` files accordingly.

## Verifying Success

After you apply the Best Practice for Changing the Host Name Permanently, you can verify whether or not it was successful.

Use the `ping` command with `newname` as its argument to verify that it has the same IP address.

```
# ping -c 1 newname
PING newname.aaa.bbb.ccc (IPaddress): 56 data bytes
64 bytes from IPaddress: icmp_seq=0 ttl=64 time=1 ms
```

```
----newname.aaa.bbb.ccc PING Statistics----
1 packets transmitted, 1 packets received, 0% packet loss
round-trip (ms)  min/avg/max = 1/1/1 ms
```

The change is successful when you can verify that the IP address returned by the `ping` command matches the one you noted before in *What is your system's IP Address?*

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
Remote applications do not run on the system; the host name is ignored.	<ul style="list-style-type: none"> <li>• Look for misspellings in the Setup Network Interface Cards application.</li> <li>• Verify that the new host name is spelled correctly when you set the DISPLAY environment variable.</li> <li>• Verify that you revised the new host name in your .profile, .login, .cshrc, .kshrc, and .rhosts files, as applicable.</li> </ul>
Network services are not running.	<ul style="list-style-type: none"> <li>• Restart the Network Services through the SysMan Menu by selecting Networking, then selecting Start or Restart network services.</li> </ul>

## Alternative Practices

Although this Best Practice is the recommended method for Changing the Host Name Permanently, if your system does not meet the requirements described in *Is This Best Practice Right for You?*, you can use the following alternative method.

1. Be sure that you have answered all the questions in *Be Prepared to Answer These Questions*.
2. Log in as root.
3. Make a backup copy of the `/etc/rc.config` file.

```
$ cp /etc/rc.config /etc/rc.config.BACKUP
```
4. Edit the `HOSTNAME` entry in the `/etc/rc.config` file, changing the entry for `oldname` to `newname`.

Before:

```
HOSTNAME="oldname.aaa.bbb.ccc"
```

After:

```
HOSTNAME="newname.aaa.bbb.ccc"
```
5. Make a backup copy of the `/etc/hosts` file.

```
$ cp /etc/hosts /etc/hosts.BACKUP
```

6. Edit the `/etc/hosts` file , changing the entry for `oldname` to `newname`.

Before:

```
IPaddress  oldname.aaa.bbb.ccc  oldname
```

After:

```
IPaddress  newname.aaa.bbb.ccc  newname
```

7. Optionally edit and change the file name of the file corresponding to `oldname` (it may be in uppercase characters) in the `/usr/sys/conf` directory; this example shows one method for doing this.

```
# cd /usr/sys/conf
# ls
GENERIC
...
OLDNAME
# sed -e "s/OLDNAME/NEWNAME/" OLDNAME > NEWNAME
# rm OLDNAME
```

---

**Note**

---

This step is provided solely for the sake of consistency. It has no bearing on the host name change.

---

8. Reboot the system with the `shutdown -r` command.  
Be sure to warn users and give them adequate time to save their files, exit their applications, and log off.  
The following is an example that reboots the system in one hour and displays a message.  

```
# /usr/sbin/shutdown -r +60 \  
System going down in 1 hour! Save your files and log out!
```
9. Edit the root `.profile`, `.kshrc`, `.login`, `.cshrc`, and `.rhosts` files as needed to reference the new system name; pay particular attention to the setting of the `DISPLAY` and `PS` environment variables.
10. Inform other users of the system name change; they may need to edit their `.profile`, `.kshrc`, `.login`, `.cshrc`, and `.rhosts` files accordingly.

## 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](mailto:best_practices@zk3.dec.com)

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